STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE PETITION OF INDIANA BELL TELEPHONE COMPANY, INCORPORATED, D/B/A AMERITECH INDIANA PURSUANT TO I.C. 8-1-2-61 FOR A THREE-PHASE PROCESS FOR COMMISSION REVIEW OF VARIOUS SUBMISSIONS OF AMERITECH INDIANA TO SHOW COMPLIANCE WITH SECTION 271(C) OF THE TELECOMMUNICATIONS ACT OF 1996	)	CAUSE NO. 41657

JOINT REPLY COMMENTS OF THE INDIANA CLECS

AT&T Communications of Indiana, Inc. ("AT&T") on behalf of itself and its affiliate TCG Indianapolis ("TCG"), MCI WorldCom, McleodUSA, and Time Warner ("Indiana CLECs") by counsel, respectfully reply to Ameritech's Performance Plan Brief on Exceptions ("Exceptions") filed on March 8, 2001. As these comments, the attached Affidavit, and the earlier two rounds of pleadings show, the Joint CLEC Remedy Plan complies with the Commission's 44 Principles governing remedy plans and incents Ameritech Indiana to improve its dismal service quality by making it expensive for that company to continue to provide poor service to CLECs. The Texas Plan's meager remedies, on the other hand, are so minimal that payment would be to SBC little more than a cost of doing business. This is particularly so, given Ameritech Indiana's prodigious earnings today[1] that likely would continue if it persists in throttling local competition. Thus, unlike the Texas Plan, the Joint CLEC Plan will assist in the development of competition in Indiana.

[1] According to published accounts, Ameritech Indiana's most recent reported return on equity was 40.6%, which is many times higher than what most other large incumbents (other than Ameritech) earn.

I. THE COMMISSION SHOULD ADOPT THE JOINT CLEC REMEDY PLAN, INCLUDING PARITY WITH A FLOOR, AS IT IS FAR SUPERIOR TO AMERITECH INDIANA'S PLAN.

A. Introduction.

Two starkly different views of competition are presented in this case. The CLECs seek an opening of the Indiana telecommunications market to allow local competition to develop. A fundamental element of effective competition is the need to incent Ameritech Indiana to provide adequate wholesale services to CLECs. The only way to provide the incentive is to adopt a remedy plan that has teeth. The CLEC Plan does just that, but it also is a balanced plan that protects Ameritech Indiana against errors unjustly increasing its remedies.

Does Ameritech Indiana support such a plan? Of course not. Ameritech Indiana is not, and could not expected to be, interested in being "incented" to provide adequate wholesale services to CLECs. That is why it proposes the ineffective Texas plan. As is shown in the earlier CLEC comments, the Texas plan is a "penalty escape plan." The Texas plan combines layers upon layers of forgiveness and "protection" to *prevent* the payment of remedies. That is why Ameritech Indiana supports the proposal here.

Even a cursory examination of the Texas plan reveals its myriad flaws. For the convenience of the Commission, attached as Exhibit 1 is a chart comparing the Texas Plan advocated by Ameritech Indiana with the Joint CLEC Remedy Plan. Unlike the unfortunate events that occurred in Texas, the Commission here has a record, and fair and open input from CLECs, that allows adoption of a more appropriate plan. The CLECs urge the Commission to reject Ameritech Indiana's attempt to import the anti-competitive Texas plan and instead use a plan that is (1) specifically designed for Ameritech Indiana, and (2) more properly incents Ameritech Indiana to stop providing poor wholesale services to CLECs.

B. The Arguments Advanced In Ameritech Indiana's Initial Brief Are Replete With Inaccuracies and Should Be Rejected By The Commission.

Ameritech Indiana's discussion on remedy plans is replete with inaccuracies and omissions. This reply brief will address the most egregious points.

1. The Texas Remedy Plan was not the product of industry consensus.

Ameritech Indiana asserts that the Texas plan was developed in a collaborative proceeding. (*See, e.g.*, Ameritech Indiana's Submission of Performance Remedy Plan, p. 2; Ameritech Indiana's Exceptions, p. 9). That contention is untrue.

Indeed, as is shown in the Affidavit attached as Exhibit 2, CLEC Affiant Dr. Michael Kalb personally participated in the portion of the Texas 271 proceeding addressing remedy plans. (Kalb Aff., ¶¶8-9). As Dr. Kalb discusses in his Affidavit, the Texas plan was negotiated between the former Chairman of the Texas Commission, selected staffers, and Southwestern Bell Telephone Company ("SWBT"), an affiliate of Ameritech Indiana. The CLECs were ***forbidden*** by these parties from attending the operative meetings with SWBT, even as observers. (*Id.*). Those negotiations resulted in a remedy plan that contained provisions to which the CLECs strongly object, and which heavily are biased in favor of SBC/Ameritech.[2] That is why SBC/Ameritech is promoting this plan in Indiana. If it were the result of a true "collaborative" effort, then at least some meaningful CLEC input would be reflected. Since that is not the case, the Texas Remedy Plan is completely biased in favor of the ILEC, which is the main reason why Ameritech Indiana has proposed it. It is hard to imagine a process that was less "collaborative" and more unfair than what transpired in Texas.

[2] The only meaningful input by CLECs, ironically, was when the CLECs were forced to categorize what performance measurement should be afforded "low," "medium," and "high" priority for penalties. This is ironic, because the CLECs opposed in Texas – as they do here – the use of such an arbitrary and anti-competitive classification. By categorizing performance measurements as high, medium, and low priority, Ameritech Indiana effectively is choosing which CLEC entry strategies should be "favored" in terms of obtaining remedies. This

2. The Joint CLEC Remedy Plan is a new plan, crafted to apply to Ameritech Indiana.

Ameritech Indiana repeatedly asserts that the Joint CLEC Remedy Plan uses a different statistical methodology than prior remedy plans advocated by various CLECs in different portions of the country. (Ameritech Exceptions, at pp. 9-11, 13, 16). This claim, when reduced to its core assertion, is simply that since the CLECs have crafted a more fair, robust, simple and accurate plan, the Commission should reject the Joint CLEC Remedy Plan because prior plans from some of the CLECs may have been different. This assertion patently is flawed and is an attempt to stall legitimate progress in this complex area. Even Ameritech Indiana modified the original Texas plan, making it even worse for competition, if that can be believed, for the benefit of its monopoly power in Indiana.

Moreover, Ameritech Indiana indeed is correct that the Joint CLEC Remedy Plan proposed here is different from prior remedy plans. Of course, this criticism also reveals the Joint CLEC Remedy Plan's strength: The Joint CLEC Remedy Plan, unlike the Texas plan, is a new plan crafted specifically for Ameritech Indiana.

A major strength of the CLEC plan lies in its statistical methods of testing for parity. The Joint CLEC Remedy Plan contains modifications over the Texas plan designed to improve the accuracy of testing, make the plan more fair, and smooth remedy payments as a function of severity of failure. The changes reflect the emergence of real data from Texas, other states, and the myriad problems with and complexities of SBC's plan.

Bizarrely, Ameritech Indiana insinuates that the CLEC plan is, somehow, more complex than the Texas plan. (Ameritech Indiana Exception, pp. 28-29). The Texas plan, however, is

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prioritization allows Ameritech to target for discrimination particular CLEC business plans.

likely the most complicated plan ever developed for the purposes of calculating remedies. The tradeoff between simplicity and accuracy was not, as is discussed by Dr. Kalb in his attached Affidavit, even considered in its development. On the other hand, the CLEC plan has as one of its guiding principles that an appropriate balance is struck between the pillars of simplicity and accuracy. Every feature of the CLEC plan is designed with this principle in mind. Therefore, the CLECs believe that at this time no other plan template has optimized this balance. As demonstrated below, all necessary calculations needed to define remedy amounts easily can be done on a standard PC and completed in the month that a correct reporting is made of performance.

Another reason for some of the CLECs using a different statistical methodology than previously was the absence of real data. After viewing detailed data, the CLECs were able to abstract a statistical methodology that works best with the kind of information generated in the telecommunications industry.

3. The Joint CLEC Remedy Plan is a self-executing, complete plan.

Another recurrent theme paraded by Ameritech Indiana is the assertion that the Joint CLEC Remedy Plan contains "numerous gaps . . . and assumptions" and, therefore, the Joint CLEC Plan somehow is not operational. (Ameritech Indiana Exceptions, pp. 2, 28-29). This contention is false.

First, as is demonstrated by the remedy analysis presented here, and in more detail in Dr. Kalb's attached Affidavit, the Joint CLEC Remedy Plan is a complete, self-executing plan. Second, and most disturbing, is Ameritech Indiana's "forgetfulness" regarding the CLEC Plan. As was shown during cross examination in Wisconsin on this issue, in October 2000 – months before Ameritech's Exceptions were filed – Dr. Kalb spoke at length with Ameritech's statistics

consultants, Dr. Chyhia Becker and Raymond Wolff, and gave them extensive information on the Joint CLEC Remedy Plan. This discussion included the essential elements of the CLEC formula, such as the use of the modified z score on submeasure cells as a simplifying yet valid estimator without the need for complicated truncation; how to calculate its balancing critical value, the meaning of the materiality parameter (delta), its effects on the results, why a single delta represents an enormous improvement over a fixed critical value (as used in the Texas plan) for emerging markets; why one can specify the variational materiality (lambda) to unity without loss, as well as all other essential elements of the Joint CLEC Remedy Plan.

As the attached Affidavit shows, virtually all of Ameritech's claims of missing or incomplete information were refuted months ago, and that the CLEC plan was explained in detail in meetings between Dr. Kalb, Dr. Becker, and Mr. Wolff. Thus, Ameritech Indiana's assertions of omissions and errors in the Joint CLEC Remedy Plan are little more than misstatements in an effort to mislead the Commission. Either way, the Commission should ignore Ameritech Indiana's baseless criticisms.

Ameritech Indiana also brazenly asserts "KPMG – the independent third party conducting and audit of Ameritech's OSS – has refused to use the CLECs' self-destructive statistical proposal for its OSS test." (Ameritech Exceptions, p. 29). This contention is false for five reasons. First, there has been no decision at all on what statistical framework is being used for the OSS 3rd Party test. Second, KPMG is not empowered to decide what statistical framework is to be used on the OSS 3rd party test; that call is made by the Commission, in consultation with its staff. Third, KPMG has not, to the knowledge of the CLECs, characterized any statistics proposal, either for 3rd party OSS testing or for remedy plans, as "self-destructive". Fourth, KPMG already has used a statistics proposal supported as a compromise by the CLECs,

in its 3rd party testing of QWEST's OSS in the fourteen-state "ROC" states. The Commission's staff consultants can verify this fact, since they are working on the "ROC" OSS 3rd Party test. Fifth, Ameritech Indiana's attempt to analogize the statistical methodology used for remedy plans with that used for 3rd Party OSS testing is comparing apples and oranges, in any event. The statistical methodology used for remedy plans is, by necessity, different than what is employed for OSS 3rd Party testing. Ameritech, for example, advocates different standards for each. The Commission should therefore ignore Ameritech's claim that KPMG somehow refuses to use the statistical methodology supported by the CLECs.

Even more egregiously, despite having the correct information adduced at the Wisconsin hearings, Ameritech Indiana does not retract its false criticisms made here, but instead repeats them in its Exceptions. (Ameritech Indiana Exceptions, pp. 2, 28-29). Ameritech Indiana's tactics certainly add nothing of value to this proceeding, and should be expressly condemned.

4. Ameritech Indiana's criticisms of parity with a floor are unfounded.

"Parity with a Floor" is a concept that surfaced over the course of several months of performance measurement collaboratives in Indiana and four other states. Parity with a floor is a valid consensus attempt by the CLECs to fill a performance gap that is of critical concern. At the heart of the Telecommunications Act of 1996 are FCC rules intended to ensure fair local exchange competition. Non-discrimination and parity of retail versus wholesale are only components of the larger purpose. Competition in Indiana largely is dependent on Ameritech Indiana providing CLECs or wholesale providers service that their customers expect and, indeed, need. Ameritech Indiana, as the CLEC's March 8, 2001 comments prove, is not even meeting old and in some cases outdated industry "minimum levels" of performance for key measures that

impact the CLECs' ability to compete and certainly alter customer's perceptions of new entrants. (Joint Comments of the Indiana CLECs, pp. 27-28, and Ex. 6 (March 8, 2001)).

Ameritech Indiana also states that parity with a floor would create an opposing incentive for Ameritech Indiana to provide CLECs with superior quality service at the expense of Ameritech Indiana's retail customers. (Ameritech Indiana Exceptions, p. 33).

Clearly, Ameritech Indiana has the responsibility to develop systems, and processes, and maintain force levels that are designed to serve all customers and to suggest that parity with a floor would be an incentive for them to alter those systems is beyond reason. This thinking suggests that instead of continuous improvement and proper staffing to stay above both retail and wholesale minimum floors, Ameritech Indiana would focus on avoiding potential remedies over fixing the problems that created the poor performance in the first place. This thinking is exactly the opposite of the CLECs' intent for advocating parity with a floor. CLECs do not want superior service; they want to avoid inferior service for all customers now and in the future.

In any event, Ameritech Indiana's contention that the parity with a floor proposal will require it to provide better performance to CLECs than retail customers is incorrect. The level of service quality provided to retail customers by Ameritech Indiana remains exclusively under Ameritech Indiana's control, with or without parity with a floor. Parity with a floor simply incents Ameritech Indiana to improve its retail service along with its wholesale service. In the absence of parity with a floor, Ameritech Indiana has every incentive to reduce its retail service quality to that of its wholesale service quality – in other words, to the lowest common denominator.

Moreover, Ameritech Indiana will not have to structure its processes to distinguish between wholesale and retail customers in order to implement parity with a floor. The CLECs have been receiving performance reports from Ameritech Indiana since December 1999. These reports show CLECs' performance compared to Ameritech Indiana's retail performance, where appropriate. These are the same reports the CLECs would use to determine parity with a floor. Thus, there is no need for Ameritech Indiana to change its reporting, other than improve its completeness.

The objective of parity with a floor is not to distinguish between retail and wholesale performance, but rather to add an incentive to improve Ameritech Indiana's dismal performance for *all* of its customers in the most competitively neutral manner possible. At this point, it seems that the only customers Ameritech Indiana is willing to compensate for poor performance are retail customers. By what process do wholesale customers receive compensation? Certainly not from a remedy plan that includes only parity comparisons that motivate Ameritech Indiana to lower its retail service performance to that of its wholesale performance level.

Ameritech Indiana poses a scenario where it installs retail POTS service in four days, and resale (wholesale) service in four days. (Ameritech Indiana Exceptions, p. 33). Ameritech Indiana states the retail benchmark standard is three days. In this case, Ameritech Indiana is providing parity service to wholesale customers and its retail customers. However, Ameritech Indiana is flunking its retail benchmark standard. If parity with a floor is adopted, Ameritech Indiana would be required to pay remedies to CLECs. Moreover, coupled with meaningful enforcement authority of public utilities (which is currently being sought in the General Assembly by the Commission and the Office of Utility Consumer Counselor), the Commission should consider imposing fines on Ameritech Indiana for its poor service to retail customers.

This scenario is the whole point of the parity with a floor plan. It is incumbent on Ameritech Indiana to provide adequate service for *all* customers.

The Commission, therefore, should retain the recommendation of its November 9, 2000 Order in this proceeding, Principle No. 17, and order the implementation of parity with a floor.

5. Ameritech Indiana's effort to secure a rubberstamping of the SBC Remedy Plan should be rejected.

There is a recurrent theme in Ameritech Indiana's brief that, because a similar plan was approved by Texas, a couple of neighboring states, and accepted by the FCC, there is a need to rubber stamp the Texas Remedy Plan in Indiana. (*See, e.g.,* Ameritech Indiana Exceptions, pp. 1, 11, 27, and 31). The CLECs urge the Commission to conduct an independent examination of both the Joint CLEC Remedy Plan and the Texas Remedy Plan. As discussed by Dr. Kalb in his attached Affidavit, subsequent to the approval of the Texas plan, more measurement data has emerged and more appropriate, more accurate quantitative methods now are apparent.

Despite contending here the Commission needs to rubberstamp the Texas plan because a handful of other places previously accepted it, Ameritech's Texas affiliate, SWBT, argued against adoption of a remedy plan in Texas that was used in another state. At the time the Texas PUC was conducting its "collaborative," the only remedy plan previously-authorized by another state and the FCC was one advanced by Bell Atlantic (now called Verizon) in New York.[3]

Despite this prior approval, SWBT sought a plan that was "Texas-specific." Now, however, SWBT's affiliate, Ameritech, argues the exact opposite, and wants to impose the Texas plan here, which was not designed for use in Indiana or the other Ameritech states. Ameritech Indiana's argument here therefore is disingenuous, and its efforts to "import" the Texas Remedy

[3] *See, Bell Atlantic – New York Authorization Under Section 271 of the Communications Act to Provide In-Region, InterLATA Service in the State of New York*, Order, 15 FCC Rcd 5413 (FCC, 2000) (hereafter "Bell Atlantic New York").

Plan into another region for which it was not designed for use should be rejected. Just as the Texas PUC – at the urging of SWBT – accepted a plan very different from the New York Remedy Plan, this Commission has the clear ability to reject the Texas Remedy Plan and adopt a better, more pro-competitive proposal, such as the Joint CLEC Remedy Plan.

Ameritech Indiana's assertion that its Plan somehow has support outside of Texas and a couple of neighboring states is incorrect. In Michigan, the staff opposes essential elements of the Texas Plan. In Michigan, the Staff of the Michigan Public Service Commission ("MPSC") filed comments in MPSC Case No. U-11830 opposing virtually every element of the Texas Plan. A copy of the MPSC Staff comments is attached as Exhibit 3.

The Michigan Staff, for example, opposes the Texas plan's arbitrary classification of performance measurements into low, medium, and high categories for purposes of paying remedies. According to the Michigan Staff, "Ameritech [Michigan]'s proposal to give different weights to each measurement is very subjective and controversial and there is no need to attempt to identify which measurement should be afforded more weight. Deficiencies in any area can result in a CLEC loss of customer." (Michigan Staff Comments, p. 5). Indeed, the Michigan Staff's argument is one of the reasons the Joint CLEC Remedy Plan omits such an arbitrary (and anti-competitive) requirement.

The Michigan Staff supports the CLEC proposal that remedies be assessed on a per measure basis, as opposed to a per occurrence basis, as the Texas plan provides. The Michigan Staff points out:

> '[B]y including a weighting based on the volume of orders affected, Ameritech's proposal incorporates a philosophy that many orders must be lost for a remedy of any consequence to result. In fact, a small, newly-in-business CLEC need lose only a very few customers before such loss is of great significance in that CLEC's ability to do business.' [citation omitted]. Secondly, it

> seems counter intuitive that remedies should increase as competition increases and the volume of orders rises. Rather, it is at these earliest stages of competition that compliant, nondiscriminatory behavior is the most crucial.

(Michigan Staff Comments, pp. 5-6).

The Michigan Staff also correctly recommends that the remedy plan should include parity comparisons of CLEC results to Ameritech retail results *and* to Ameritech's affiliate. (Michigan Staff Comments, at 9). The Joint CLEC Remedy Plan calls for parity comparisons with the Ameritech affiliate, instead of the benchmark, when there is an Ameritech affiliate in operation, and provides for remedy payments based on the appropriate comparison.

The Michigan Staff also is correct in not limiting the rights of carriers – both Ameritech and the CLECs – to pursue additional remedies over and above those delineated in the plan that are available under state and federal law. (Michigan Staff Comments, p. 9). The Joint CLEC Remedy Plan makes explicit allowance for such a possibility.

The Michigan Staff also recommends payment of remedies by direct check and not by bill credits. (Michigan Staff Comments, p. 9). The Joint CLEC Remedy Plan calls for direct check payments; the Ameritech Indiana plan does not. Requiring payments via check is a far more pro-competitive requirement than using a bill credit, because CLECs should not be placed in the uncomfortable circumstance of having to transact a certain amount of business with Ameritech Indiana in order to receive remedies for past poor performance.

The Joint CLEC Remedy Plan does not automatically reduce by 50% the number of performance measurements eligible for remedy payments within an arbitrary 2-year time period, as does the Ameritech Indiana Texas-like plan. The Joint CLEC Remedy Plan certainly allows for periodic reviews on the issue, with the ultimate decision resting in the appropriate place – the

Commission.[4] The Michigan Staff supports the CLECs on this important issue. (Michigan Staff Comments, p. 10).

6. The Illinois and Ohio Commissions have not ordered the implementation of the Texas Remedy Plan.

Ameritech Indiana contends the Illinois and Ohio Commissions have "approved" the Texas Remedy Plan. (Ameritech Indiana Exceptions, p. 79). As Ameritech Indiana undoubtedly is aware, this contention is, if viewed in the most favorable light, misleading, and if viewed more realistically, it is intentionally false.

While it is true SBC voluntarily proposed in merger proceedings in Illinois and Ohio to use the Texas Remedy Plan if its takeover of Ameritech were approved, neither state "approved" the Texas plan. The remedy plan was offered as a merger "commitment," and there was no real debate addressing any alternative, as there has been here. Therefore, what is in place in Illinois and Ohio now are interim remedy plans that can be used until those states adopt a more suitable plan, such as the Joint CLEC Remedy Plan. Indeed, in both states proceedings are underway to adopt a permanent remedy plan.[5]

7. The Texas Plan Is Not "Working Today" in Indiana.

Ameritech Indiana asserts that the Texas Plan "is already working today, in Indiana and throughout the SBC and Ameritech operating regions, pursuant to the FCC's merger conditions." (Ameritech Indiana Exceptions, p. 2). This claim is false. The CLECs signing this brief never have been offered by Ameritech Indiana the "opportunity" to obtain remedies under the Texas

[4] The CLECs also agree with the Michigan Staff's recommendation that the Commission should be allowed to recommend to the FCC for removal of Ameritech's Section 271 interLATA authority if Ameritech's performance measure compliance is deficient for a period of time. (Michigan Staff Comments, p. 10).

[5] *See,* Illinois Commerce Commission Docket No. 01-0120; Public Utilities Commission of Ohio Case No. 00-942-TP-COI.

Plan, even on an interim basis. Indeed, while the Texas Plan is in place today on an interim basis in Illinois and Ohio – and Ameritech is paying nominal remedies for bad service[6] -- Ameritech Indiana refused to provide such an interim commitment in Indiana, since it successfully fought in the courts the Commission's ability to impose such a commitment (or any commitment at all, for that matter) in the SBC/Ameritech merger case.

8. The Texas plan fails to deter anti-competitive conduct.

Ameritech Indiana contends that its remedy plan will provide a "meaningful incentive" to meet its performance benchmarks.[7] (Ameritech Indiana Exceptions, p. 6). This contention is incorrect. Several features of the Texas plan restrict Ameritech Indiana's exposure to liquidated damages and penalties to a level that cannot be expected to deter conduct that is discriminatory or denies CLECs a meaningful opportunity to compete. Those same limitations mean that the Texas plan will not adequately compensate CLECs that are injured by such conduct. While the CLECs take exception to the annual cap on liability, their primary concern is with other features of the plan that virtually ensure that Ameritech Indiana never will approach that cap, despite poor wholesale performance. As the FCC has said, "it is important to assess whether liability under an enforcement mechanism . . . would actually accrue at meaningful and significant levels when performance standards are missed. Indeed, an overall liability amount would be meaningless if there is no likelihood that payments would approach this amount, even in instances of widespread performance failure." *Bell Atlantic New York* ¶ 437.

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[6] *See,* Joint Comments of the Indiana CLECs, pp. 38-39.

[7] Interestingly, Ameritech no longer claims, as it did in performance remedy plan cases in Michigan and Wisconsin, that the Texas Plan deters anti-competitive conduct. Ameritech has backed off that (admittedly untrue) assertion, and now claims its remedy plan, in tandem with other enforcement tools, will prevent it from harming competition. (Ameritech Indiana Exceptions, pp. 6-7).

The Texas plan fails this test in many ways. Some examples: its calculation of damages and penalties based on volume of CLEC transactions ("per occurrence"); its classification of important measures as "low" so that very small damages multipliers apply; its placement of low caps on other important measures where Ameritech Indiana historically has had poor performance; and, its deferral of Tier 2 penalties until Ameritech Indiana has reported performance failure for CLECs in the aggregate (average) for three consecutive months. In all of these examples, the Texas plan allows serious performance failures to go without serious sanction.

The Texas plan's "per occurrence" approach, which is described in Ameritech Indiana's Exceptions (at pp. 23-24), will not deter discrimination when transaction volumes are small, as is the case in Indiana.

First, as previously noted, the Texas plan does not provide adequate damages or penalties for performance measurements involving small transaction volumes. Because the Texas plan calculates both damages and assessments predominantly on a "per occurrence" basis, it necessarily produces limited sanctions at low volumes. Even if the Texas plan's per occurrence multipliers were set at reasonably compensatory levels for liquidated damages purposes – and at $25 to $150 they are not – those same multipliers will have little deterrent effect so long as they are being multiplied against only dozens, or even hundreds of transactions. Nor does the prospect of Tier 2 assessments at a maximum of $500 per occurrence offer significant deterrent effect, where CLEC volumes remain in the hundreds across a major metropolitan area and where inferior wholesale support might afford Ameritech Indiana a significant competitive advantage in an emerging service, such as xDSL. Under the Texas plan, discriminatory performance that likely will thwart competitors in a start-up mode for new services (*e.g.*, advanced services) will

expose Ameritech Indiana to little liability. Compounding this shortcoming is the fact that Ameritech Indiana obtains the greatest return from anti-competitive behavior in the early stages of market development. Nascent competition is the most vulnerable to anti-competitive conduct by monopolists, as new entrants struggle for a toe-hold in the market.

Second, the Texas plan's "per occurrence" approach does not mean that sanctions will apply to each CLEC transaction in which Ameritech Indiana missed the parity or benchmark requirement. When Ameritech Indiana's monthly performance on a measure shows that Ameritech Indiana was sufficiently out of parity or off of the benchmark to yield a z-score worse than the critical z-value, the Texas plan uses a formula to determine how many "occurrences" will be used to calculate liquidated damages (the same formula applies in calculating Tier 2 assessments after three months of consecutive violation for all CLECs). Ameritech Indiana first calculates the performance level that would have yielded a z-score equal to the critical value (*i.e.*, what is the worst performance Ameritech Indiana could have had that month on that measure and still achieve a passing score on the z-test). The difference between Ameritech Indiana's actual reported performance for the CLEC and this minimum required performance level is compared and expressed as a percentage of the minimum required performance level. That percentage then is multiplied by the number of CLEC observations reported by Ameritech Indiana under the measure during the month to determine the number of "occurrences" on which damages or assessments will be based. Although this can lead to a number of occurrences that is greater than the total, the Texas plan truncates the occurrences to 100%. Thus, the methodology is mathematically inconsistent and flawed.

To illustrate, assume that Ameritech Indiana reported a 1.5-day interval for its retail and a 3.0-day interval for a CLEC on an average installation interval measure, where Ameritech

Indiana had provisioned 100 units for the CLEC during the month. Assume that the z-test showed that these results represented a parity violation, and that the worst performance by Ameritech Indiana that would have passed the z-test on that month's data was an average interval of 2.0 (*i.e.*, an average of 2.0 for the CLEC, compared to 1.5 for Ameritech Indiana, would have produced a z-score equal to the critical z value). Ameritech Indiana's actual reported performance for the CLEC (3.0) exceeded this minimum required performance level (2.0) by 50%. Multiplying 50% times the 100 units provisioned for the CLEC that month under that measure, Ameritech Indiana would pay damages based on 50 "occurrences." Only the transactions reported for the CLEC within the specific geographic and product classification where the performance violation occurred are used in calculating the "occurrences." Under this example, even if Ameritech Indiana installed every CLEC order in 3 days, where 2 was required to meet the statistical parity test, Ameritech Indiana would pay damages based on only half of those transactions.

Under the Texas plan, damages are determined by multiplying the number of occurrences, calculated as described above, by a fixed amount. The plan includes a table of these multipliers, which range from $25 to $150 per occurrence in the first month of violation, to an oddly computed maximum of $400 to $800 per occurrence in the sixth consecutive month of violation and thereafter. Within a given month, the multiplier chosen depends on whether the measure is classified for Tier 1 purposes as "high," "medium," or "low."

Also, any actual occurrences of poor performance associated with a measure that happened to pass the parity test (perhaps even by random variation) will remain unremedied. Thus, the ability of each of the measures to generate remedies effectively is capped. Even so, some of these per "occurrence" measures have additional, even smaller caps applied. Indeed,

there are some measures that are not remedied on a per "occurrence" basis in the Texas plan. They are capped immediately as soon as they fail. There is no provision in the Texas plan for increasing consequences as a function of severity for those measures.

More egregiously, the Texas plan does not afford CLECs an opportunity to present evidence on what likely damages a CLEC would incur as a result of Ameritech Indiana's discriminatory treatment. The multipliers set in the liquidated damages table were adopted by the Texas PUC without any evidence, much less an evidentiary hearing and fact finding, regarding the damages that a CLEC is likely to sustain from SBC/Ameritech performance violations on various measures. Liquidated damages of $25 will not compensate a CLEC for late-provided loop qualification information if the CLEC loses an xDSL customer as a result. Even liquidated damages of $150 are dubious compensation if a missed due date has that same result. Certainly these liquidated damages multipliers do not account for the consequential damage to CLECs whose entry into a developing market, such as the markets for advanced services, is thwarted or retarded by discriminatory wholesale support. These amounts also do not take into account the economic benefit to Ameritech Indiana from essentially driving a customer back to Ameritech Indiana as a result of poor wholesale service performance. This complicated computational scheme obscures the above observations.

Regardless of the adequacy of these multipliers for compensatory purposes, they are inadequate to serve as serious consequences for noncompliance. If the plan calls for payments that do not reach a reasonable level of compensation, these penalties become essentially unenforceable. Because SBC/Ameritech has chosen a per occurrence approach, the Texas plan's liquidated damages provisions (Tier 1) almost by definition cannot provide the type of penalty that would suffice to deter SBC/Ameritech from providing inferior or inadequate wholesale

support, particularly in Indiana, where CLEC volumes are small. Thus, the need for a separate (Tier 2) consequence structure under the plan.

Tier 2 of Ameritech Indiana's proposal, however, does not fill the gap so the Texas plan remains an effective deterrent to anti-competitive behavior. Tier 2 does not fill the gap in the plan's deterrent impact because no Tier 2 penalty applies until after Ameritech Indiana reports three consecutive months of failure on a measure. This fact represents one (of many) serious flaws in the Texas plan, particularly as it applies to nascent services, because, so far as the plan is concerned, Ameritech Indiana can respond to an emerging CLEC service with two months of discriminatory wholesale support and face no penalty. By the time Tier 2 penalties come into play, the damage to CLECs' nascent services may have been done.

Further, Tier 2 assessments are based on the same purportedly compensatory multipliers used in the liquidated damages table for violations that extend into a third month. This amount would be paid to the state, over and above liquidated damages paid to CLECs for those same violations. However, as long as total CLEC transactions are low, which may be the case for some time while new entrants gain a market toe-hold, particularly if CLECs have difficulty obtaining the required wholesale support, Tier 2 threatens Ameritech Indiana with assessments of no more than a few hundred thousand dollars while it protects a statewide monopoly worth hundreds of millions of dollars. Indeed, for measures that are subject to a cap, such as interconnection trunk blockage, the plan sets the maximum assessment for sustained discriminatory performance against CLECs as a whole at the ludicrously low level of $75,000.

Moreover, not all the measures get into Tier 2, only a subset deemed by Ameritech Indiana to be critical. This means that there are gaps in the ability of the Texas Tier 2 to associate consequences with discriminatory behavior. Furthermore the three-month requirement

effectively reduces the chance of random variation type 1 errors to zero, while still allowing type 2 errors of virtually any magnitude.

The few exceptions for which the Texas plan sets sanctions on a "per measure" basis, *e.g.*, collocation, do not adequately address the lack of incentives provided under the plan as it applies to measures where CLEC observations are reported in small volumes. Also, it does not increase with severity. Not a single provisioning, maintenance, or ordering measure is subject to a per measure assessment under the plan. [Only caps are set!] In practice, however, many measures are being reported in very small volumes. Given the state of competition in Indiana and the level of product and geographic disaggregation in the performance measures, Ameritech Indiana is reporting very small volumes for many measures, even on an "all CLEC" basis. Without a broader set of minimum per measure sanctions, there is no basis for concluding that the Texas plan will act as a real deterrent to performance failures by Ameritech Indiana in the nascent stages of competition over a new service or with a new market entrant.

9. The Texas plan is not self-executing.

Ameritech Indiana contends that the Texas plan is self-executing. (Ameritech Exceptions, p. 1). This contention is incorrect. To advance the public interest, Ameritech Indiana must commit itself to self-enforcement mechanisms that are "automatically triggered" by noncompliance with applicable performance standards, "without resort to lengthy regulatory or judicial intervention." Otherwise, local exchange competition may be delayed while new entrants are required to "engage in protracted and contentious legal proceedings to enforce their contractual and statutory rights to obtain necessary inputs from the incumbent."[8] The Texas plan

[8] FCC, *Second BellSouth Louisiana Order* at ¶ 364.

leaves Indiana CLECs facing the likely prospect of protracted and contentious legal proceedings merely to realize the meager damages and assessments offered by the plan.

Under the Texas plan, Ameritech Indiana has no liability for damages or assessments to the extent that its noncompliance with a performance measurement is the result of non-Ameritech Indiana problems associated with third-party systems or equipment, which could not have been avoided by Ameritech Indiana in the exercise of reasonable diligence.

Given Ameritech Indiana's widespread reliance on systems and equipment that have been designed, manufactured, and/or serviced by third parties, this added exemption has the potential to turn every instance of reported noncompliance into a negligence issue – *i.e.*, could Ameritech Indiana have avoided the parity or benchmark failure by exercising reasonable care (reasonable diligence). Given Ameritech Indiana's propensity to find an excuse for every reported violation so long as it does not find itself required to confess intentional discrimination, there is every likelihood that Ameritech Indiana will invoke this provision with frequency, if only to defer the realization of liquidated damages liability and discourage CLECs from attempting to collect. This term alone has the potential to eviscerate self-enforcement from the plan, and it forecloses any conclusion that the Texas plan provides for damages and assessments that are "automatically triggered," "without resort to lengthy regulatory or judicial intervention."

The Texas plan also excuses Ameritech Indiana from paying liquidated damages or assessments for reported noncompliance that is "the result of an act or omission by a CLEC that is in bad faith." Fewer phrases have proved more pregnant with litigation than "bad faith." The Texas plan offers examples of "bad faith," such as a CLEC's unreasonable failure to provide forecasts to Ameritech Indiana, that threaten to equate that term with simple negligence. Again, this excuse is wholly unjustified in the context of the Texas plan, which separately protects

Ameritech Indiana to the extent that reported noncompliance results from CLEC acts or omissions in breach of contract or that otherwise are unlawful. Adding the "bad faith" excuse will do nothing other than foster disputes and create the opportunity for Ameritech Indiana to claim "bad faith dumping" or "unreasonable failure to forecast" whenever new CLEC products, geographical expansions, or increasing CLEC volumes tax Ameritech Indiana's systems.

10. The Joint CLEC Remedy Plan's statistical balancing methodology prevents the inaccurate assessment of penalties.

Ameritech Indiana asserts that use of the Joint CLEC Remedy Plan balancing methodology "would penalize Ameritech Indiana over $8 million per month even if its performance was nondiscriminatory." (Ameritech Exceptions, p. 13). This argument, however, contradicts the incessant mantra employed in the rest of Ameritech Indiana's Exceptions: its theory that the Joint CLEC Remedy Plan is not a complete document. If, indeed, the Joint CLEC Remedy Plan were not complete, how does it assess such penalties?

Regardless of its inconsistency, Ameritech Indiana's argument is false for the simple reason that the balancing methodology used by the CLECs does not allow the assessment of penalties where Ameritech Indiana provides wholesale service in accordance with its performance measurements. Moreover, Ameritech Indiana's criticism is based upon reliance on "fixed critical values." According to Dr. Kalb, the use of fixed critical values such as a 95 percent confidence level is no longer considered today by eminent and numerous statisticians in the field to be the most accurate method of making a parity determination. Dr. Kalb states in his Affidavit:

> over the last few years, and especially due to the statisticians' report that came out of Louisiana, it's becoming more and more generally agreed to in the field that the appropriate method for calculating the critical value is not to use a fixed value. The appropriate method is to actually use what's called a balancing

> methodology that balances Type 1 and Type 2 error in order to determine the critical value and then proceed to calculate an appropriate test statistic and make the comparison to that critical value. (Kalb Aff. ¶56).

Indeed, the largest state in which SBC operates is in the process of rejecting SBC/Ameritech's attacks on the balancing methodology. According to Dr. Kalb, the Staff of the Public Utilities Commission of California ("California PUC") issued a proposed decision using the balancing methodology for Ameritech Indiana's affiliate, Pacific Bell. (*Id.*). It should be noted that the California PUC subsequently issued an interim order establishing a final remedy plan utilizing the balancing methodology.

11. The Joint CLEC Remedy Plan is complete.

Ameritech Indiana asserts that the CLEC Plan is not complete because "key factors that appear in the CLEC equations are not defined". Ameritech specifically complains that three variables – lambda, epsilon and phi – are somehow not properly defined in the CLEC Plan. (Ameritech Indiana Exceptions, p. 28). This argument is false. First, the CLEC plan submitted on February 9, 2001 contains the relevant information, either in the Plan itself or, as Ameritech admits, in the supporting documentation. Thus, the important information is of record here. Second, Ameritech is well aware of oral testimony months ago from Dr Kalb in the Wisconsin remedy plan proceeding explaining the derivation of lambda. Indeed, the Joint CLEC Remedy Plan both conceptually and numerically defines lambda, and the record shows that Lambda = 1. (*Id.*). The derivation of epsilon and phi, contrary to Ameritech Indiana's claim, is readily ascertainable. All that need be done is to calculate the critical value for all submeasures, and epsilon and phi are derived.

12. The Texas plan confers upon Ameritech Indiana unfettered discretion to use permutation testing for small sample sizes.

Ameritech Indiana asserts permutation testing, which is used to more accurately calculate remedies for small sample sizes, is part of the Texas plan. (Ameritech Indiana Exceptions, pp. 9-10. What is left unsaid by Ameritech Indiana, however, is the fact that Ameritech Indiana, not the Commission, has the ability to use (or not use) permutation testing as it sees fit.

As demonstrated from the discussion above, Ameritech Indiana's Exceptions contains innumerable false arguments. These contentions, one has to assume, are to "scare" the Commission away from the Joint CLEC Remedy Plan. The Commission should not reward such tactics and, instead, should adopt the better remedy plan offered by the CLECs.

C. Calculation Of Remedy Payments Under The Joint CLEC Remedy Plan.

1. Introduction.

A fundamental issue facing the Commission is ensuring that the remedy plan adopted here is a comprehensive plan that can be implemented and monitored by the Staff with minimal administrative activity. As was shown in the CLECs' two earlier sets of comments, the Joint CLEC Remedy Plan is, indeed, a completely rounded plan that can be implemented and administered by the Commission.

Despite the convincing and unrebutted evidence that the Joint CLEC Remedy Plan is fully executable, Ameritech Indiana repeatedly raises the false canard that the CLEC plan contains "numerous gaps", "undefined terms", and "cannot be executed"." (*See, e.g.*, Ameritech Indiana Exceptions, pp. 2, 29-30). Indeed, rather than addressing the remedy plan calculations already provided in other states (such as Michigan and Wisconsin, where the CLECs provided remedy calculations months ago), Ameritech Indiana instead offers general policy criticisms and uses misleading examples.

Ameritech Indiana's strategy, however, is transparent. Ameritech Indiana does not want the Commission to examine exactly how the Joint CLEC Remedy Plan ***actually*** works. That is because Ameritech Indiana has one reason, and one reason only, for proposing the Texas plan: Remedy payments under the Texas plan are so low as to constitute only a "cost of doing business," and thus would not prevent anti-competitive behavior and, therefore, would allow Ameritech Indiana to continue to offer low quality wholesale services to CLECs. This, in turn, will slow down – if not altogether stymie – the development of local exchange competition in Indiana.

The CLEC plan, on the other hand, incents Ameritech Indiana to discontinue providing poor wholesale services to the CLECs. That is what a remedy plan is supposed to do. A remedy plan with nominal penalties, like the Texas plan, is not a remedy plan at all, but is really nothing more than phony window dressing that enables Ameritech Indiana to continue to monopolize the local telecommunications market in Indiana.

2. Calculation of remedies under the CLEC plan.

As demonstrated below, and in the actual calculations contained in Dr. Kalb's Affidavit, the Joint CLEC Remedy Plan is well defined, and with one small exception,[9] complete and ready to use.

Below are examples of the calculation of remedy payments utilizing the Joint CLEC Remedy Plan. The CLECs refer the Commission to the Affidavit of Dr. Kalb for the underlying details. (*See*, Kalb Affidavit, ¶¶ 17-55). As the following discussion explains, because of Ameritech Indiana's refusal to provide the necessary detail on a timely basis, it is not possible to

[9] A personal computer is necessary.

give a full accounting of remedies under the Joint CLEC Remedy Plan, as well as a corresponding calculation of remedy payments under the Texas plan.

The calculation provided herewith is specific to AT&T/TCG, since those are the entities to which Dr. Kalb had access to specific performance data. The other CLECs would, however, calculate remedies in the same fashion; the only difference would be the performance data.

AT&T/TCG received performance results for all five Ameritech states, including Indiana, since December 1999, as Ameritech has rolled out its performance measures. As of August 2000, all of the measures Ameritech had committed to import from Texas have been reported.

However, no audit of the Ameritech Indiana reported results has been completed. AT&T and TCG are aware of several measures that are being reported incorrectly, and asked their Ameritech Indiana account team to correct the reports. There may be more measures with missing data, but the time available is short. While AT&T and TCG use the Ameritech Indiana self reported data to calculate remedy payments for specific measures where there is enough data reported by Ameritech Indiana to complete the calculations under the Joint CLEC Remedy Plan, it is not possible to guarantee the accuracy of the underlying data.

The reason the CLECs cannot guarantee the accuracy of Ameritech's data is due to Ameritech's failure to comply with its merger commitments. As the Commission is aware, one of the conditions of the Illinois Commerce Commission's ("ICC") and the Public Utility Commission of Ohio's ("PUCO") orders approving SBC's takeover of Ameritech was that CLECs obtain the benefits of the Texas performance measurement and remedy plan. Unfortunately, although months ago AT&T signed an amendment to its AT&T/Ameritech Illinois, TCG/Ameritech Illinois, AT&T/Ameritech Ohio, and TCG/Ameritech Ohio interconnection agreements allowing for exactly this information to be obtained, Ameritech

refused, until December 2000, after the record in this case was closed, to provide both the remedy payment details, and the payments themselves. Hence, this refusal means AT&T has no Ameritech-specific payment information to provide.

Given Ameritech's refusal to provide this necessary data, there is no information available to AT&T/TCG allowing a comparison of how remedies would be paid under the Texas plan to the remedies that would be paid under the CLEC Remedy Plan. This is because the CLECs have no way to compare Ameritech's treatment of itself and its affiliates versus how AT&T/TCG are being treated. Furthermore, from a business standpoint, it is not possible for AT&T/TCG to have other CLEC data, since it is confidential. In order to provide a complete picture of how the Texas plan operates versus the Joint CLEC Remedy Plan, that data is also needed. Ameritech's failure to provide AT&T/TCG with such data is not unique, however. None of the undersigned CLECs have the necessary data.

Ameritech's refusal to provide data does not, however, preclude an estimation of remedies under the Joint CLEC Plan. As is shown below, and in more detail in Dr. Kalb's Affidavit, estimated remedy payments can be calculated under the Joint CLEC Remedy Plan based on the performance data available.

In order to calculate the remedy amounts certain data is needed. Clearly the collection of transactional data for Ameritech (retail), its affiliates, and each of the CLECs is sufficient to the task. However, not all these details are required. In order to determine what data or summaries are necessary, it is first necessary to classify the data into subsets. The first analysis separates the retail data into a subset, the affiliate data into another, and the individual CLEC data into the remaining subsets. Each CLEC subset needs to be distinct. This collection of data sets is known to Ameritech; however, each CLEC neither has detailed knowledge of the ILEC data nor any

knowledge whatsoever of the other individual CLECs' data in any form. Without knowledge of at least certain summary statistics for each CLEC, it is impossible to calculate Ameritech's Tier 1 liability. However, certain aggregate data of the CLECs is available to all. If it is of the right type, then it becomes possible to calculate Tier 2 remedies. After dividing up the data by competitor, the next step is to subgroup within each competitor's data set the transactional information for each submeasure. For each submeasure, for each competitor, the appropriate performance statistic must be calculated. This calculation will depend on submeasure and class of submeasure. For each submeasure within the parity class, there are three possibilities: the average of the data, the proportion better than some level of the submeasure, and a ratio of two submeasure quantities. For each submeasure within the benchmark class, there are two possibilities: the proportion better than some standard level and the mean better than some standard level. In all cases the number of transactions also is needed. Furthermore, for the parity measures expressed as averages, the Ameritech standard deviation is needed. If any of the above data is missing, it will not be possible to calculate remedies completely. Indeed, the same summary data is needed to calculate remedies under the Texas plan. However, the way the Texas plan operates, it is not possible to calculate actual individual submeasure remedies unless data from all submeasures is known.

Due to the proprietary nature of the data, different portions are available to different parties. The exception is Ameritech, which has access to all the data in it lowest terms. To calculate Tier 1 remedies for a given CLEC, the above summary performance data for Ameritech, its affiliates, and the given CLEC are needed. For AT&T and TCG these data are not sufficiently available to calculate Tier 1 remedies. While some summary data is available, not enough data is available to complete an overall Tier 1 calculation for either AT&T or TCG.

In addition, even if the summary data were complete, AT&T/TCG do not have access to other CLEC proprietary data. Therefore, the Tier 1 calculations are not complete. Finally, although aggregate data spreadsheets exist and are available to all, fatal omissions occur there as well – this means, again, that total Tier 2 remedies cannot be calculated. Finally, affiliate data is needed in order to distinguish whether the affiliate performance is appropriate for parity comparisons instead of the retail data. Affiliate data almost totally is lacking.

3. The remedies calculation uses specific agreed performance measurements and is based on real information.

In order to help the Commission analyze how benchmark calculations are done within the Joint CLEC Remedy Plan, submeasures that appear to have sufficient data are used. The submeasures come from measure number 2 and are: Percent Responses Received Within 8.0 Seconds - Address Verification and Percent Responses Received Within 12.0 Seconds - Address Verification. Moreover, these measures have been agreed to by Ameritech Indiana and the CLECs as remedy-eligible.

Each submeasure is investigated for nine months of activity. For each month and submeasure we are given the number of transactions that were within the required time as well as the total number of transactions. From these we can calculate the next column, which is the percentage of transactions that were within the standard for each month (x). In the next column, we see that the benchmark proportion (B) is different for each submeasure. For the first submeasure the required proportion is 90%. For the second submeasure the required proportion is tighter at 95%. We next ask a series of questions to see whether x is in compliance, and if not, how severely it has failed. These columns would not be necessary in a "production" version. Note that the severity classifications are different for the two submeasures because the strictness of the benchmark proportion is different. The plan clearly and quantitatively defines the severity

breakpoints. For the 90% and 95% benchmarks exhibited here, the breakpoints are as shown in more detail in Dr. Kalb's surrebuttal testimony.

The 8.0 second submeasure for the first three months indicate that Ameritech Indiana is compliant. Months 4 and 5 fail intermediately and severely, respectively. Month 6 is compliant, but months 7, 8, and 9 fail either intermediately or severely. The next column indicates that there is a chronic override in month 9 only, because month 9 is the (only) third month in a row with a failure. Month 10, when calculated, has the potential of producing the override as well if it fails, but this data is not available yet. In each month based on the value of x and B, we now can calculate the remedy. The compliant months have none; the remainder are either intermediate or severe in amount. The actual remedy takes into account the chronic override. There is only one override in month 9. However, because it has a severe failure, the actual remedy is $25,000 anyway.

The 12.0-second submeasure is provided next. Note that with a stricter benchmark, the performance designations also are stricter. Actual performance is compliant in months 1, 2, and 3. However, various severities of failure occur for the following 6 months. Furthermore, from months 6 through 9 the chronic override is activated and will continue until a compliant month. Remedies easily are calculated by the usual formula; however, due to the chronic override in months 6 through 9, the remedies are $25,000 for each of those months even though some had lower calculated remedy amounts due to only basic or intermediate failure.

The very last column of the submeasures shows that an Ameritech affiliate was operating during a portion of this 9-month period. The Joint CLEC Remedy Plan would call for a parity comparison with the affiliate instead of the benchmark.

The best way to get a sense of the total liability faced by Ameritech Indiana under this plan is to structure the remedy plan as a tool which calculates the remedies as a function of the data for all the submeasures, CLECs, affiliates, and the ILEC itself. However, as previously was noted, this data is not yet forthcoming from Ameritech. Therefore, Dr. Kalb estimates and attempts to bound the liability with the knowledge at hand.

4. The remedy calculation.

Consider that there are N CLECs and a total of n submeasures for each. The CLECs may be extensive in their business, in which case they will touch many of the submeasures. Or, they may be limited service providers, in which case they will have activity in only a few of the submeasures. If the average remedy per submeasure among these N CLECs is a, then the total tier 1 remedy can be expressed as a function of the proportion of non-complying submeasures, p:

$$r(p;a) = aNnp \qquad 0 \le p \le 1$$

Dr. Kalb expressed a family of remedy amounts as parameterized by the average remedy per submeasure, a. The average remedy per submeasure can be as small as zero if the ILEC is compliant and as large as $25,000 in the Joint CLEC plan. Also, in this form, the remedy is proportional to both the number of CLECs and the total number of submeasures. For Indiana, Dr. Kalb assumed that the number of CLECs is 22; the number of active CLECs is probably less than 8. Let us also set the number of submeasures equal to 850. Although the actual total is about 1100, only about 80% are remedial, while the others are diagnostic. In actuality, only about 700-800 aggregated submeasures are touched each month in Indiana. Dr. Kalb's calculations consistently attempt to upper bound Ameritech Indiana's liability. Under these conditions a representative set of calculations will give the following table of total tier 1 remedies ($ millions):

		Proportion of Submeasures Out of Compliance										
		0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
	$0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	$2,500	0.0	1.3	2.6	3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.0
	$5,000	0.0	2.6	5.2	7.8	10.4	13.0	15.6	18.2	20.8	23.4	26.0
Average	$7,500	0.0	3.9	7.8	11.7	15.6	19.5	23.4	27.3	31.2	35.0	38.9
Remedy	$10,000	0.0	5.2	10.4	15.6	20.8	26.0	31.2	36.3	41.5	46.7	51.9
per	$12,500	0.0	6.5	13.0	19.5	26.0	32.5	38.9	45.4	51.9	58.4	64.9
Submeas.	$15,000	0.0	7.8	15.6	23.4	31.2	38.9	46.7	54.5	62.3	70.1	77.9
	$17,500	0.0	9.1	18.2	27.3	36.3	45.4	54.5	63.6	72.7	81.8	90.9
	$20,000	0.0	10.4	20.8	31.2	41.5	51.9	62.3	72.7	83.1	93.5	103.8
	$22,500	0.0	11.7	23.4	35.0	46.7	58.4	70.1	81.8	93.5	105.1	116.8
	$25,000	0.0	13.0	26.0	38.9	51.9	64.9	77.9	90.9	103.8	116.8	129.8

The average remedy per submeasure labels each row. Note that a basic failure is $2,500, an intermediate submeasure failure is about $6,000, and a severe failure is $25,000. The proportion of submeasures out of compliance labels each column. Although we allow the proportion to go to unity, this number must be much less than .20 (20%) in order for competition to have any hope of success. Dr. Kalb also included a boundary line for the monthly procedural threshold ($20.9 million), which is the point at which the Commission will need to hear why performance is so poor and remedies are so large. Thus, for example, if the average remedy per submeasure is basic ($2,500) and the proportion of out of compliance submeasures is 0.1 (10%), then the monthly liability of Ameritech Indiana would be $1.3 million under the Joint CLEC Remedy Plan. This amount is well below the procedural threshold.

Under the above scenarios, for the entire table, the tier 2 remedies would be far less than half of the tier 1 remedies if competition levels were very low. If the CLECs were an active force in the market, tier 2 remedies quickly could be made to disappear entirely due to the market penetration factor.

5. The Joint CLEC Remedy Plan provides for escalation of penalties where Ameritech Indiana persists in providing poor wholesale services to CLECs.

Dr. Kalb also provides examples of the effect of the escalation in penalties based on the degree of difference between the results and what would be compliant results. Dr. Kalb's mathematical calculations are provided in his surrebuttal testimony; the results, along with the relevant Ameritech Indiana data, are summarized below.

To work out numerical examples, Dr. Kalb assumes that this month Ameritech Indiana performed 100,000 retail installations and that the average number of days to complete those installations was 3.20 days. The sample standard deviation of the retail installations is assumed to be 2.25 days for this example. Dr. Kalb further assumes that Ameritech Indiana performed 120 installations for CLEC A and that the wholesale sample mean for CLEC A was 3.50 days. From these numbers, the modified z score is calculated to be –1.46. Again from these numbers, the balancing critical value with which to compare the modified z score is calculated by Dr. Kalb to be –1.37. The modified z score is less (more negative) than the balancing critical value. Therefore, in this example, Ameritech Indiana would be out of compliance. The value of the severity ratio calculated by Dr. Kalb is 1.07. The ratio value is designated as a basic failure, and the remedy amount as calculated by the plan would be $2,556.25. This would be the amount due CLEC A for discrimination by Ameritech Indiana in a time to install service measure, in the month of interest. A similar calculation would be done for each measure touched by CLEC A to obtain the total remedy due CLEC A. Finally, CLECs B, C, D, etc., would have this process repeated for each submeasure they each touched to calculate their corresponding remedies.

The table below, prepared by Dr. Kalb using MS Excel on a PC, shows how the remedy amount changes as the wholesale mean varies from 3.20 days to 4.20 days with all other quantities remaining the same as in the previous example. The first column is the retail sample

size; the next is the retail sample mean; the third column is the retail standard deviation. The next two columns refer to Ameritech Indiana performance for the wholesale CLEC A customers. These columns are the wholesale sample size and the wholesale sample mean. The wholesale sample mean has been prepared to vary in small steps from a compliant declaration to a severely failing one. The results of the changing test declarations are shown in the next three columns that display the modified z scores, balancing critical value, and severity ratios. The last two columns exhibit the performance designation and calculated remedy amount.

The range of wholesale sample means provides the entire range of possible remedy values.

n_x	$\bar{x}$	σ_x	n_a	$\bar{a}$	z	z^*	z/z^*	Failure	Remedy
100,000	3.20	2.25	120	**3.20**	0.00	-1.37	0.00	Compliant	**$0.00**
100,000	3.20	2.25	120	**3.30**	-0.49	-1.37	0.36	Compliant	**$0.00**
100,000	3.20	2.25	120	**3.40**	-0.97	-1.37	0.71	Compliant	**$0.00**
100,000	3.20	2.25	120	**3.50**	-1.46	-1.37	1.07	Basic	**$2,525.00**
100,000	3.20	2.25	120	**3.60**	-1.95	-1.37	1.42	Basic	**$3,502.78**
100,000	3.20	2.25	120	**3.70**	-2.43	-1.37	1.78	Intermediate	**$5,902.78**
100,000	3.20	2.25	120	**3.80**	-2.92	-1.37	2.13	Intermediate	**$9,725.00**
100,000	3.20	2.25	120	**3.90**	-3.41	-1.37	2.49	Intermediate	**$14,969.44**
100,000	3.20	2.25	120	**4.00**	-3.89	-1.37	2.84	Intermediate	**$21,636.11**
100,000	3.20	2.25	120	**4.10**	-4.38	-1.37	3.20	Severe	**$25,000.00**
100,000	3.20	2.25	120	**4.20**	-4.87	-1.37	3.56	Severe	**$25,000.00**

The computations shown above for tier 1 parity measures are very similar to and as direct as tier 1 benchmarks, tier 2 parity measures, and tier 2 benchmarks.

6. The Joint CLEC Remedy Plan allows for the accurate and comprehensive calculation of chronic remedy payments when necessary.

In order to provide a complete picture, a brief discussion is provided below on how to calculate the payment of chronic remedies. Dr. Kalb's Affidavit contains the relevant background information.

The Joint CLEC Remedy Plan contains a simple and direct chronic remedy structure. Remedies are paid when the results for a given submeasure fail for the third month in a row. The severity of the failure is no longer relevant, as SBC/Ameritech has continued to perform below the requirement in the business rules of the measure. For Tier I payments, a chronic failure always is remedied by Ameritech Indiana paying $25,000, and is in lieu of the payment that would be calculated using the reported results. Similarly, a chronic remedy payment for Tier II failures would be paid at n$25,000, where n is taken from the market share chart supplied in Exhibit 3 to the Joint CLEC Comments filed on March 8, 2001.

Once a chronic remedy payment has been made for a given submeasure, that level of payment ($25,000 for Tier I, n$25,000 for Tier II) continues until the results return to acceptable levels. If the given submeasure again fails after a period of compliance, the remedy payments are calculated for Month 1, and if failure occurs in the next month, for Month 2, and if failure occurs in the next month, the payment returns to $25,000 or n$25,000.

7. The Joint CLEC Remedy Plan allows for a quick and simple determination when the Commission's review threshold is reached.

Another important issue for determining how remedies are calculated under the Joint CLEC Remedy Plan is the correct application of the review threshold. To assist the Commission in determining whether a review threshold should be used as the CLECs propose, a brief example is provided below, with more detail contained in Dr. Kalb's Affidavit.

The review threshold is reached when SBC/Ameritech incurs remedy payments to CLECs and to the State in excess of 1/6 of 36% of net return in a given month. In Indiana's case, 36% of net return is approximately $125 million. If SBC/Ameritech's payments in a given month exceed 1/6 of $125 million, or $20.9 million, a Commission review would begin.

For example, assume that there are 15 CLECs receiving remedy payments in a given month. Also assume that all the payments for the failing submeasure are at the severe or chronic level ($25,000). Further assume that SBC/Ameritech has chronically or severely failed five submeasures (n$25,000, where the market penetration factor, n, is currently 10 in Indiana).

The Tier II payment would be $1,250,000 (5*(10*25,000)). Assume that SBC/Ameritech chronically or severely failed 775 submeasures, or roughly 52 submeasures for each of the 15 CLECs. The payments for both Tier I and Tier II would then exceed $20.9 million, and a Commission review of Ameritech Indiana's poor performance would begin.

8. The Joint CLEC Remedy Plan is ready for use upon adoption.

As demonstrated above, and in Dr. Kalb's Affidavit, remedies can be calculated today under the Joint CLEC Remedy Plan. Hence, if the Commission adopts the Joint CLEC Remedy Plan, it can be implemented immediately. Ameritech Indiana's arguments to the contrary are not supported by the facts summarized here and, therefore, should be rejected.

III. CONCLUSION

The Joint CLEC Plan is comprehensive, fair, and tailored for Ameritech's unique service quality problems. Moreover, the Joint CLEC Remedy Plan complies with almost everyone one of the Commission's forty-four principles. In those rare instances where the CLEC Plan does not explicitly discuss the Commission's Principles, the CLECs support inclusion of such requirements in the final order in this proceeding.

This stands in stark contrast with the Texas Plan proposed by Ameritech Indiana, which does not meet a substantial portion of the Commission's Principles, is utterly inappropriate for use in the Ameritech states, and will provide no legitimate incentive to improve currently dismal service quality. Moreover, even if Ameritech's service quality were to improve short-term, the

meager remedies payable under the Texas Plan ensures future service deterioration is likely to occur. Thus, Ameritech would continue to have an incentive to hamstring the development of local exchange competition, and to offer poor retail services.

For the reasons discussed here, and also in their prior comments, the CLECs respectfully request that the Commission adopt the Joint CLEC Remedy Plan.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that on the 9th day of April, 2001, copies of the foregoing Joint Reply Comments of the Indiana CLECS were mailed by first-class United States mail, postage prepaid to:

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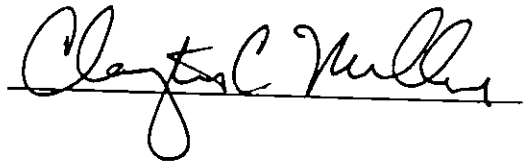

COMPARISON OF REMEDY PLANS

Joint CLEC Remedy Plan	Ameritech Remedy Plan
• Plan strikes appropriate balance between simplicity and accuracy. - Plan is well defined, simple to implement and administer, and can be operational upon adoption by Commission. - All necessary calculations to define remedy amounts easily can be done on a standard PC and completed in the month that correct reporting is made. - Based on an audited system with verifiable data and processes. - Plan reflects emergence of real data from Texas, other states, and the myriad problems with and complexities of SBC's Texas plan.	• Plan complicated. - Includes arbitrary classification of performance measures into low, medium, and high categories for purposes of paying remedies, which govern the size per occurrence damages or assessments associated with each measure. - Proposal to give different weights to each measurement is very subjective and controversial, and there is no need to attempt to identify which measurement should be afforded more weight because differences in any area can result in a CLEC loss of customer. - Classifies important measures and measures where Ameritech historically has had poor performance as "low" so that very small damage multipliers apply. - Based on Texas plan, which essentially was negotiated in unilateral meetings between the Chairman of the Texas Commission and SBC/SWBT, without allowing the CLECs to attend.
• Self-executing. - Remedies automatically are triggered upon an objective demonstration that Ameritech has failed to provide service at level required. - Removes the unreasonable delays and expense of litigation to enforce rights.	• Not self-executing. - Leaves CLECs facing the prospect of protracted and contentious legal proceedings to realize meager damages and assessments offered by plan.

Joint CLEC Remedy Plan	Ameritech Remedy Plan
• Remedies assessed on a per-measure basis.	• Remedies assessed on a per-occurrence basis, based on the volume of CLEC transactions, which will not deter discrimination when transaction volumes are small and, thus, does not provide adequate damages or penalties for performance measurements involving small transaction volumes. - Means that sanctions will not apply to each CLEC transaction in which Ameritech misses parity or benchmark requirement.
• Employs appropriate statistical methodology. - Based on the modified z statistic and type 1/type 2 error balancing critical values. - Proposes an error balancing methodology that takes into account sample size and a level of measured failure considered appropriate by the parties. - Statistical testing methodology balances the probability of a false result fairly between CLECs and Ameritech. - Appropriateness of methodology has been validated in Louisiana and Georgia. BellSouth supports the methodology throughout its footprint. Also under review in Michigan, Ohio, Illinois, Indiana, California, Vermont and New Jersey. - Appropriate level of disaggregation. Shows performance results based upon dimensions such as products and geography.	• Adds arbitrary layer of forgiveness by applying a statistically unjustified version of the z-test to measures for which the performance standard is a fixed benchmark. - Chooses a fixed critical value approach, which is more appropriate for controlled experimentation than to the observational data collection technique that characterizes the adopted performance measures in Indiana, for all submeasures. - Concentrates too narrowly on controlling the statistical errors that negatively affect Ameritech and completely ignores the frequently much larger statistical errors that harm CLECs' potential to become viable competitors.

Joint CLEC Remedy Plan	Ameritech Remedy Plan
• Includes a "Parity with a Floor" provision. - Necessary where Ameritech provides poor service to both wholesale and retail customers, and that poor service is below state minimum telephone requirements.	• Rejects "Parity with a Floor" concept.
• No absolute cap on annual remedy payments. - Has a procedural threshold in place which allows for a regulatory review when a certain level of remedy payment is exceeded, and, thereby, protects Ameritech from remedies that execute indefinitely without review. - Makes allowance for pursuit of additional remedies over and above those in plan that are available under state and federal law.	• Has annual cap equal to 36% of Ameritech's net return in Indiana. - Provides Ameritech with means to evaluate cost of market share retention through delivery of non-compliant performance. - Once absolute cap is reached, further performance deterioration is irrelevant. - Other features of plan virtually ensure Ameritech never will approach cap, despite poor wholesale performance. - Does not afford CLECs an opportunity to present evidence on what likely damages a CLEC would incur as a result of Ameritech's discriminatory treatment. - Liquidated damages multipliers do not account for consequential damages and are inadequate to serve as serious consequence for noncompliance.
• Remedies are sufficient enough to incent Ameritech to meet its regulatory obligations. - Remedies escalate and accelerate according to duration and magnitude of poor performance.	• Applies a myriad of rules to the performance results, which give Ameritech numerous ways to avoid paying damages and water down strength of plan as incentive builder.

Joint CLEC Remedy Plan	Ameritech Remedy Plan
• Where an Ameritech affiliate is in operation, calls for parity comparison with affiliate instead of benchmark, and provides for remedy payments based on the appropriate comparison.	• Fails to provide remedies where discrimination is shown between Ameritech's affiliates and CLECs.
• Rejects individual weightings in each performance measure because any weighting process is inherently subjective and arbitrary - Superior to permit market to determine which measures are most important by seeing what functions customers need from CLECs, and that CLECs, in turn, need from Ameritech.	• Uses weightings for individual performance measurements to determine the magnitude of consequences that should be avoided. - Weightings inappropriately may influence the market entry mode selected by a particular CLEC.
• Tier II takes market penetration into account. - If there is less competition, penalties more severe and some go to state. - Once competition reaches 50% penetration payments to state are eliminated.	• Tier II assessments flawed. - Do not apply until after Ameritech reports three (3) consecutive months of failure on a measure. - Threatens Ameritech with assessments of no more than a few hundred thousand dollars. - Does not include all measures, only a subset deemed critical by Ameritech.
• Allows for periodic reviews, with ultimate decision resting with Commission.	• Automatically reduces by 50% the number of performance measurements eligible for remedy payments within arbitrary 2 year period.

Joint CLEC Remedy Plan	Ameritech Remedy Plan
• Calls for direct check payments rather than using bill credit.	• Employs bill credit which places CLECs in the uncomfortable circumstance of having to transact a certain amount of business with Ameritech in order to receive remedies for past poor performance.

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE PETITION OF INDIANA BELL TELEPHONE COMPANY, INCORPORATED, D/B/A AMERITECH INDIANA PURSUANT TO I.C. 8-1-2-61 FOR A THREE-PHASE PROCESS FOR COMMISSION REVIEW OF VARIOUS SUBMISSIONS OF AMERITECH INDIANA TO SHOWCOMPLIANCE WITH SECTION 271(C) OF THE TELECOMMUNICATIONS ACT OF 1996.	)	CAUSE NO. 41657

AFFIDAVIT OF

MICHAEL KALB, PH.D.

ON BEHALF OF

AT&T COMMUNICATIONS OF INDIANA, INC.,

MCLEODUSA

TCG INDIANAPOLIS

TIME WARNER TELECOM OF INDIANA, L.P

AND

WORLDCOM, INC.

April 9, 2001

1. My name is Michael Kalb. My business address is AT&T Corp., 295 N. Maple Avenue, Basking Ridge, New Jersey.

2. I received a Bachelor of Science degree in Physics in 1969 from the Cooper Union. In 1971 I received a Master of Philosophy degree in Physics and in 1974 a Ph.D. in Physics, both from the Yale University. I spent the next five years as a Chaim Weitzman Fellow at Yale University and the Center for Theoretical Physics at the Massachusetts Institute of Technology.

3. I was first employed by AT&T in 1979. At that time, I joined Bell Laboratories as a Member of Technical Staff evaluating the performance of voice and data communications systems on telephone networks. This led to numerous published and proprietary works describing quantitative models of performance based on laboratory and live Network studies. In 1986, I was promoted to Distinguished Member of Technical Staff after beginning the systematic formulation of relevant domestic and international performance parameters and standards for voice and data. In 1994 I was elected Vice-Chair of T1A1.7, the working group responsible for standardization of performance of voice and data communications on North American telephone networks. My work in this domestic standards body culminated with the production of a ratified technical report on the performance of unbundled loops, as mandated by the Telecommunications Act of 1996. Also, during this period, I consulted frequently with the Law and Government Affairs area of AT&T in the

formulation of the LCUG Service Quality Measurements ("SQMs"). In 1999, I moved to the Law and Government Affairs area of AT&T where I continue to apply my performance expertise to problems associated with the Telecommunications Act of 1996.

4. In my current position as policy analyst at AT&T, one of my responsibilities is to identify and promote AT&T's position on the need for adequate, self-executing performance remedies. In that role, I have been directly involved in the development of AT&T's policy on this subject, represented AT&T in numerous LCUG meetings, participated in state workshops relating to performance measurements and consequences, and have met with the Commission and the Department of Justice to provide AT&T's input on a variety of topics relating to performance measurement and incentives. I have represented AT&T and other CLECs in several regulatory proceedings concerning the appropriate statistical methodology to use in an effective performance measures methodology. I have met with the FCC on this issue and have participated in state regulatory proceedings, workshops and meetings in Illinois, Indiana, California, New York, Texas, Wisconsin, Michigan, Florida, Georgia, Louisiana, Vermont, Connecticut, Massachusetts, New Jersey, Nevada, Indiana, Virginia, and Colorado.

5. Although I am employed by AT&T, my affidavit is being provided on behalf of a coalition of Indiana Competitive Local Exchange Carriers ("CLECs").

The CLECs sponsoring my affidavit are: AT&T, TCG, McLeodUSA, Time Warner Telecom of Indiana, L.P., and WorldCom.

6. In my affidavit I respond to the comments and Exceptions of Ameritech Indiana supporting the SBC Texas Remedy Plan. I will not necessarily respond to each and every claim made by Ameritech Indiana, since many of their assertions have already been addressed in the initial two rounds of comments filed by the CLECs.

7. The bulk of my affidavit addresses Ameritech's most recent pleading, its Exceptions filed on March 8, 2001. I will also discuss my personal experiences in Texas working on the Remedy Plan adopted by the Texas PUC, as well as my meetings last year with Ameritech statistical consultants where I discussed, in detail, the Joint CLEC Remedy Plan. As I discuss in detail below, Ameritech Indiana's statistical analysis, rather than supporting the viability of the Texas Plan, in fact shows how the Texas Plan will do little or nothing substantially to incent Ameritech Indiana to provide adequate wholesale service quality to CLECs. I will also provide detailed responses to Ameritech Indiana's criticisms of the Joint CLEC Plan to show that the CLEC Plan, unlike the Texas Plan, is a complete, self-executing, and customized plan that can be immediately applied in Indiana.

8. Ameritech asserts that the Texas Plan was developed in a collaborative proceeding. (*See, e.g.*, Ameritech Indiana's Submission of Performance Remedy Plan, p. 2). I am astonished that Ameritech makes such an

assertion, since I do not recall any Ameritech personnel working on the statistical issue in Indiana and neighboring states attending a single Texas 271 collaborative session. I recall Ameritech's primary employee handling this issue, Mr. Salvatore Fioretti, stating on cross examination in a Wisconsin PSC proceeding on December 1, 2000 that he did no work in the Texas case. Indeed, unlike Mr. Fioretti and Ameritech's other consultants working on the remedy plan issue in Indiana, Illinois, Michigan, Ohio, and Wisconsin, none of whom participated in the Texas 271 collaboratives, I personally participated in the portion of the Texas 271 proceeding addressing performance remedies.

9. The Texas Plan is not the result of a sound "collaborative" effort, as Ameritech implies. The Texas Remedy Plan was essentially negotiated in unilateral meetings between the former Chairman of the Texas Commission and SBC/SWBT. Although the CLECs met *pro forma* separately with staff and the Chairman, the CLECs were prohibited by these parties from attending the operative meetings with SBC/SWBT, even as observers. Those negotiations resulted in a remedy plan that contained provisions to which the CLECs strongly objected, and are heavily biased to favor SBC.[1] That is why Ameritech is promoting this plan in Indiana. If it were the true result of a "collaborative" effort, then at

[1] The only meaningful input, ironically, was the CLECs were forced to categorize what performance measurement should be afforded "low", "medium", and "high" priority for penalties. This is ironic, because the CLECs opposed in Texas – as they do here – use of such arbitrary and anti-competitive classification. By categorizing performance measurements as high, medium and low priority, Ameritech is effectively choosing which CLEC entry strategies should be "favored" in terms of obtaining remedies.

least some meaningful CLEC input would be reflected. Since that is not the case, the Texas Remedy Plan is biased in favor of the ILEC, which is the main reason why Ameritech has proposed it. The process that transpired in Texas was far less than "collaborative" and subsequently far more unfair.

10. Ameritech repeatedly asserts that the Joint CLEC Remedy Plan is different from prior remedy plans advocated in different portions of the country. This claim, when broken down into its core assertion, seems to mean that since the CLECs have crafted a more fair, robust, simple and accurate conception, the Commission should reject the Joint CLEC Remedy Plan. This assertion is patently flawed and throws cold water on legitimate progress in this complex area.

11. Moreover, Ameritech is indeed correct that the CLEC Remedy Plan proposed here is different from prior remedy plans. Of course, this criticism is irrelevant. The CLEC Plan, unlike the Texas Plan, is a new plan crafted for Ameritech in Indiana.

12. A major well-designed element of the CLEC plan is the statistical methods for testing of parity. The changes to the CLEC plan are modifications planned to improve the accuracy of testing, make the plan more fair, and smooth remedy payments as a function of severity of failure. The changes reflect emergence of real data from Texas, other states, and the myriad problems with and complexities of SBC's Texas plan. One of the areas that Ameritech chose to ignore was that of the complexity of the

Texas Plan. The reason is obvious. The Texas plan is likely the most complicated plan every developed for the purposes of calculating remedies. The tradeoff between simplicity and accuracy was not, to the best of my knowledge, even considered in its development. On the other hand, the CLEC plan has as one of its guiding principles that an appropriate balance be struck between the pillars of simplicity and accuracy. Every feature of the CLEC plan is designed with this principle in mind. Therefore, the CLECs believe that at this time no other plan template has optimized this balance. As will be shown below, all necessary calculations needed to define remedy amounts can be easily done on a standard PC and completed in the month that a correct reporting is made of performance.

13. Ameritech repeatedly offers the criticism that some of the CLECs previously supported a statistical methodology that had some similarity to the one employed by the Texas Plan. (Ameritech Exceptions, pp. 9-10, 13). The support given, however, was in the absence of an analysis of real data. After viewing detailed data, the CLECs were able to abstract a statistical methodology that works best with the kind of information generated in the telecommunications industry.

14. Another recurrent theme offered by Ameritech is the assertion that the Joint CLEC Remedy Plan contains "numerous gaps . . . and assumptions" and, therefore, the Joint CLEC Plan somehow is not operational. (Ameritech Indiana Exceptions, pp. 2, 28-29). This contention is false.

First, as is seen by the remedy analysis presented later in my affidavit, and summarized in Part I.C. of the Reply Comments, the Joint CLEC Plan is a complete, self-executing plan. Second, and most disturbing, is Ameritech's "hiatus of knowledge" on the CLEC Plan.

15. In October, 2000, well before Ameritech Indiana's Comments and Exceptions were filed, I spoke and wrote at length with Dr. Chyhia Becker and Raymond Wolff, both of whom are consultants used by Ameritech on the remedy plan issue and gave extensive information on the Joint CLEC Remedy Plan, including the essential elements of the CLEC formula, such as the use of the modified z score on submeasure cells as a simplifying yet valid estimator without the need for complicated truncation, how to calculate its balancing critical value, the meaning of the materiality parameter (delta), its effects on the results, why a single delta represents an enormous improvement over a fixed critical value (as used in the Texas plan) for emerging markets, why one can specify the variational materiality (lambda) to unity without loss, etc.

16. Moreover, I was present when another of Ameritech's consultants – Dr. Levy, who is the boss of Dr. Becker and Mr. Wolff, was cross-examined on this very subject on December 1, 2000 in hearings in the Wisconsin Remedy Plan proceeding, Public Service Commission of Wisconsin Docket No. 6720-TI-160. In response to questions from counsel for AT&T, Dr. Levy pointed out that Dr. Becker and Mr. Wolff both work closely with him on preparing his testimony in Wisconsin, which is substantively the

same as Ameritech's various pleadings and documents filed here.[2] Moreover, I offered detailed testimony in Wisconsin showing that virtually all of Ameritech's claims of missing information were in fact resolved in meetings between Dr. Becker, Mr. Wolff, and myself.[3] Thus, Ameritech's claims of "omissions" in the Joint CLEC Remedy Plan are beyond reasonable understanding. The Commission should ignore Ameritech's criticisms. They are simply not accurate, given the information Ameritech's personnel and consultants have in their possession.

17. I will now provide an example of how remedies can be calculated under the Joint CLEC Plan. My calculations will demonstrate that the Joint CLEC Remedy plan is well defined and can be operational upon its adoption by the Commission.

18. The example I provide here will also rebut Ameritech's various criticisms of the Joint CLEC Remedy Plan and prove that the CLEC Plan is fully operational.

19. AT&T/TCG received performance results for all five Ameritech states, including Indiana, since December 1999, as Ameritech has rolled out its performance measures. As of August 2000, all of the measures Ameritech had committed to import from Texas have been reported but in a flawed manner.

20. No audit of the Ameritech reported results has yet to be completed. AT&T and TCG are aware of several measures that are being reported

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[2] Public Service Commission of Wisconsin Docket No. 6720-TI-160, Tr. Vol V, pp. 495-496 (December 1, 2000).

incorrectly, and have asked our Ameritech account team to rectify the reports. There may be more measures with missing data that we have yet to uncover. While AT&T and TCG will use the Ameritech self reported data to calculate remedy payments under the Joint CLEC Remedy Plan, I can make no representation to the accuracy of the underlying data. Unfortunately, as I discuss below, due to limitations in the reported data, I am unable to calculate remedy payments under the Texas Plan, and can only do so under the Joint CLEC Plan where sufficient data has been forthcoming from Ameritech.

21. As the Commission is aware, one of the conditions of the Illinois Commerce Commission's ("ICC") and the Ohio Public Utility Commission's (PUCO) orders approving SBC's takeover of Ameritech was that CLECs obtain the Texas performance measurement and remedy plan. Unfortunately, although months ago AT&T signed an amendment to its AT&T/Ameritech Illinois, TCG/Ameritech Illinois, AT&T/Ameritech Ohio, and TCG/Ameritech Ohio interconnection agreements allowing for exactly this information to be obtained, Ameritech has refused, to date, to provide remedy payment details, nor the payments themselves. I was informed that, as recently as last week AT&T again requested this information via a discovery request for use in an Illinois proceeding, ICC Docket No. 01-0120, but Ameritech objected to providing this information. This refusal means AT&T has no Ameritech-specific payment information to provide.

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[3] *Id.* at pp. 603-604.

22. Given Ameritech's refusal to provide this necessary information, I cannot calculate how remedies would be assessed under the Texas Plan. I have no way to compare Ameritech's treatment of itself and its affiliates versus how AT&T is being treated. Furthermore, from a business standpoint, it is not appropriate for me to have other CLEC data, since it is confidential. In order to provide a full picture on how the Texas Plan operates versus the CLEC plan, we need that data as well.

23. I have been informed by the other CLECs sponsoring this affidavit that Ameritech is also not providing them with performance information. Such CLEC data must exist but are also only in the hands of Ameritech.

24. Ameritech's refusal to provide data does not, however, preclude estimation of overall remedies under the Joint CLEC Remedy Plan. In the interest of providing some direct quantitative information to the Commission that can help in its final judgment, I here calculate remedy payments under the Joint CLEC Plan based on the performance data available. I would like to be able to provide the Commission with a full and exact calculation of the remedy amounts that ensue from this performance data. However, as we shall see, the information for Indiana, and the other Ameritech states at our disposal is inadequate for the task. I here also exhibit an extensive benchmark example for which calculations of the CLEC plan can be done to show how they proceed and display their result. I also will estimate and bound the remedies under the CLEC plan as an indication of Ameritech liability.

25. In order to calculate the remedy amounts certain data is needed. Clearly the collection of transactional data for Ameritech (retail), its affiliates, and each of the CLECs is sufficient to the task. However, not all these details are required. In order to determine what data or summaries are necessary, let us first classify the data into subsets. As mentioned above the first analysis separates the retail data into a subset, the affiliate data into another, and the individual CLEC data into the remaining subsets. Clearly, each CLEC subset needs to be distinct. This collection of data sets is known to Ameritech, however, each CLEC has no detailed knowledge of the ILEC data nor any knowledge whatsoever of the other individual CLECs' data in any form. Without knowledge of at least certain summary statistics for each CLEC, it is impossible to calculate Ameritech's Tier 1 liability. However, certain aggregate data of the CLECs is available to all. If it is of the right type, then potentially Tier 2 remedies could be calculated. After dividing up the data by competitor, the next step is to subgroup within each competitor's data set the transactional information for each submeasure. For each submeasure, for each competitor, we need to calculate the appropriate performance statistic. This will depend on submeasure and class of submeasure.

26. For each submeasure within the parity class, there are three possibilities: the average of the data, the proportion better than some level of the submeasure, and a ratio of two submeasure quantities. For each submeasure within the benchmark class, there are two possibilities: the

proportion better than some standard level and the mean better than some standard level. In all cases the number of transactions is also needed. Furthermore, for the parity measures expressed as averages the Ameritech standard deviation is needed. If any of the above data is missing, it will not be possible to calculate remedies completely. Indeed, the same summary data is needed to calculate remedies under the Ameritech Texas-like plan. However, the way that plan operates, it is not possible to calculate actual individual submeasure remedies unless data from all submeasures is known.

27. Due to the proprietary nature of the data, different portions are available to different parties. The exception is Ameritech, which has access to all the data in it lowest terms. To calculate Tier 1 remedies for a given CLEC, the above summary performance data for Ameritech, its affiliates, and the given CLEC are needed. For AT&T and TCG these data are not sufficiently available to calculate Tier 1 remedies. While some summary data is available in our spreadsheets, too much is not evident to complete an overall Tier 1 calculation for either AT&T or TCG. While I am not privy to the other CLECs data, I have been told by the other CLECs sponsoring my affidavit that similar fatal omissions are also likely. In addition, even if the summary data were complete, I would not have access to other CLEC proprietary data. Therefore, I could not complete the Tier 1 calculations. Finally, although aggregate data spreadsheets exist and are available to all, fatal omissions occur there as well and again total Tier 2 remedies

cannot be calculated. Finally, I note that affiliate data is needed in order to distinguish whether the affiliate performance is appropriate for parity comparisons instead of the retail data. Affiliate data is almost totally lacking.

28. In order to facilitate understanding how benchmark calculations are done within the CLEC plan I investigate two submeasures that appear to have sufficient data. The submeasures come from measure number 2 and are: Percent Responses Received Within 8.0 Seconds - Address Verification and Percent Responses Received Within 12.0 Seconds - Address Verification. They appear in spreadsheet request2.xls under the tab entitled: Example Benchmark.

29. Note that each submeasure is investigated for nine months of activity. For each month and submeasure we are given the number of transactions that were within the required time and in the next column the total number of transactions. From these we can calculate the next column, which is the percentage of transactions that were within the standard for each month (x). In the next column we see that the benchmark proportion (B) is different for each submeasure. For the first the required proportion is 90%. For the second submeasure the required proportion is tighter at 95%. We next ask a series of questions to see whether x is in compliance, and if not, how severely it has failed. These explanatory columns would not be necessary in a "production" version. Note that the severity classifications are different for the two submeasures because the strictness of the

benchmark proportion is different. The plan clearly and quantitatively defines the severity breakpoints. For the 90% and 95% benchmarks exhibited here the breakpoints are as shown.

30. We see that for the 8.0 second submeasure that the first three months are compliant. Months 4 and 5 fail intermediately and severely respectively. Month 6 is compliant, but months 7, 8, and 9 fail either intermediately or severely. The next column indicates that there is a chronic override in month 9 only. This is because month 9 is the (only) third month in a row with a failure. Month 10, when calculated, has the potential of producing the override as well if it fails, but this data is not in yet. In each month based on the value of x and B we can now calculate the remedy. The compliant months have none; the remainder are either intermediate or severe in amount. The actual remedy takes into account the chronic override. There is only one override in month 9. However, because it has a severe failure the actual remedy is $25,000 anyway.

31. We discuss the 12.0 second submeasure next. Note that with a stricter benchmark, the performance designations are also stricter. Actual performance is compliant in months 1,2, and 3. However, various severities of failure occur for the following 6 months. Furthermore, from months 6 through 9 the chronic override is activated and will continue until a compliant month. Remedies are easily calculated by the usual formula, however, due to the chronic override in months 6 through 9, the remedies

are $25,000 for each of those months even though some had lower calculated remedy amounts due to only basic or intermediate failure.

32. The very last column of the submeasures shows that an Ameritech affiliate was operating during a portion of this 9 month period. The CLEC plan would call for a parity comparison with the affiliate instead of the benchmark.

33. The best way to get a notion of the total liability under which Ameritech is put due to this plan is to develop the remedy plan as a tool which calculates the remedies as a function of the data for all the submeasures, CLECs, affiliates, and the ILEC itself. However, we have already seen that for business and technical reasons this data is not yet forthcoming. Therefore we will estimate and attempt to bound the liability with the knowledge at hand.

34. Consider that there are N CLECs and a total of n submeasures for each. The CLECs may either be extensive in their business, in which case they will touch many of the submeasures. On the other hand they may be limited service providers, in which case they will have activity in only a few of the submeasures. If the average remedy per submeasure among these N CLECs is a, then the total tier 1 remedy can be expressed as a function of the proportion of non-complying submeasures, p:

$$r(p;a) = aNnp \qquad 0 \le p \le 1$$

We have expressed a family of remedy amounts as parameterized by the average remedy per submeasure, a. The average remedy per

submeasure can be as small as zero if the ILEC is compliant and as large as $25,000 in the CLEC plan. Also, in this form the remedy is proportional to both the number of CLECs and the total number of submeasures. For Indiana, let us assume that the number of CLECs is 22; the number of active CLECs is probably less than 8. Let us also set the number of submeasures equal to 850. Although the actual total is about 1100, only about 80% are remedy-eligible, while the others are diagnostic. In actuality only about 700-800 aggregated remedied submeasures are touched each month in Indiana. Our calculations consistently attempt to upper bound Ameritech's liability. Under these conditions a representative set of calculations will give the following table of total tier 1 remedies ($millions):

		Proportion of Submeasures Out of Compliance										
		0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Average Remedy per Submeas.	$0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	$2,500	0.0	1.3	2.6	3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.0
	$5,000	0.0	2.6	5.2	7.8	10.4	13.0	15.6	18.2	20.8	23.4	26.0
	$7,500	0.0	3.9	7.8	11.7	15.6	19.5	23.4	27.3	31.2	35.0	38.9
	$10,000	0.0	5.2	10.4	15.6	20.8	26.0	31.2	36.3	41.5	46.7	51.9
	$12,500	0.0	6.5	13.0	19.5	26.0	32.5	38.9	45.4	51.9	58.4	64.9
	$15,000	0.0	7.8	15.6	23.4	31.2	38.9	46.7	54.5	62.3	70.1	77.9
	$17,500	0.0	9.1	18.2	27.3	36.3	45.4	54.5	63.6	72.7	81.8	90.9
	$20,000	0.0	10.4	20.8	31.2	41.5	51.9	62.3	72.7	83.1	93.5	103.8
	$22,500	0.0	11.7	23.4	35.0	46.7	58.4	70.1	81.8	93.5	105.1	116.8
	$25,000	0.0	13.0	26.0	38.9	51.9	64.9	77.9	90.9	103.8	116.8	129.8

The average remedy per submeasure labels each row. Note that a basic failure is $2,500, an intermediate submeasure failure is about $6,000, and a severe failure is $25,000. The proportion of submeasures out of compliance labels each column. Although we allow the proportion to go to unity, this number must be much less than .20 (20%) in order for

competition to have any hope. We have also included a boundary line for the monthly procedural threshold ($20.9million), the point at which the Commission will need to hear why performance is so poor and remedies are so large. Thus, for example, if the average remedy per submeasure is basic ($2,500) and the proportion of out of compliance submeasures is 0.1 (10%), then the monthly liability of Ameritech would be $1.3 million under the CLEC plan. This amount is well below the procedural threshold.

35. Under the above scenarios, for the entire table, the tier 2 remedies would be approximately equal to the tier 1 remedies if competition levels were very low. If the CLECs were an active force in the market, tier 2 remedies could be quickly made to disappear entirely due to the market penetration factor.

36. As part of my analysis I will provide examples of the effect of the escalation of penalties based on the degree of difference between the results and what would be compliant results. Let us assume that we are treating a tier 1 parity submeasure describing the number of days Ameritech takes to install service in a particular month. Two sets of data points will come out of this process. The first set of monthly points will be a collection of numbers that equal the number of days Ameritech took for each retail installation. This set of data points are represented by $\{ x_i \mid i = 1,2,\ldots,n_x\}$, where x_i is the number of days of the i^{th} retail installation of the month, and n_x is the total number of retail installations that month. Similarly, we can represent for CLEC A as $\{a_j \mid j = 1,2,\ldots,n_a\}$ the set of

wholesale installation times in the month. Where a_j is the number of days for the j^{th} wholesale installation by Ameritech for CLEC A that month. Also, n_a is the total number of wholesale installations for CLEC A in the month. We now have sufficient information to calculate the tier 1 remedies for this parity submeasure for CLEC A.[4]

37. For example, to do the test for measures expressed as averages, we must calculate two quantities, the modified z score and the balancing critical value to which the modified z score is compared. The modified z score is analogous to the score that a student gets on a math exam, and balancing critical value is similar to the lowest passing grade, calculated by an enlightened teacher. The modified z score is given by

$$z = \frac{\bar{x} - \bar{a}}{\sigma_x \sqrt{\frac{1}{n_x} + \frac{1}{n_a}}}.$$

Other than the already defined sample sizes, the quantities that comprise the modified z score are the sample mean of the retail installation times,

$$\bar{x} = \frac{1}{n_x} \sum_{i=1}^{n_x} x_i ,$$

the sample mean of the wholesale installation times for CLEC A,

[4] It is interesting to note that Ameritech has been unwilling to share data of this nature with the parties. If the data for all submeasures was readily available, the decisions regarding statistics and remedies would likely proceed more rapidly and accurately. Actually, as we will see, the detailed data points describing retail performance are not needed after the remedy plan is in operation. All that is needed are the summary statistics describing the number of retail transactions, retail estimator (e.g., sample mean), and retail standard deviation.

$$\bar{a} = \frac{1}{n_a}\sum_{j=1}^{n_a} a_j ,$$

and the sample standard deviation of the retail installation times,

$$\sigma_x = \sqrt{\frac{\sum_{i=1}^{n_x}(x_i - \bar{x})^2}{n_x - 1}} .$$

All quantities are simply and directly computable from the data.

38. Next we compute the balancing critical value. This quantity is given by

$$z^* = -\frac{\delta\sqrt{n_x n_a}}{2\sqrt{n_x + n_a}} .$$

Again all quantities that comprise the balancing critical value come from the data except the materiality, □, which takes the value 0.25.[5]

If the submeasure passes the test because

$$z \geq z^* ,$$

then there is compliance and no remedies are due.

If the submeasure fails the test because

$$z < z^* ,$$

then the severity ratio

$$(z / z^*) = \frac{2(\bar{a} - \bar{x})}{\delta\,\sigma_x}$$

is used to compute the remedy amount according to the formula[6]

[5] Actually the CLEC proposal has that this quantity should be less than 0.25. However, for the sake of definiteness in our proposal we do the calculations with it equal to 0.25.

[6] This formula is easily converted to a look-up table; however, in it present form it is more accurate and easier for a computer to calculate.

$$r(z/z^*)=\begin{cases} 0 & (z/z^*)\le 1 \\ a(z/z^*)^2+b(z/z^*)+c & 1<(z/z^*)\le 3 \\ \$25{,}000 & 3<(z/z^*) \end{cases}.$$

39. Where z/z^* is the severity ratio; $r(z/z^*)$ is the remedy amount in dollars for the value of the severity ratio; a = \$5,625, b = – \$11,250, and c = \$8,125 are constants chosen to compute the remedy amount directly in dollars.

40. To work out numerical examples, let us assume that this month Ameritech did 100,000 retail installations and that the average number of days to do those installations was 3.20 days. Also, let the sample standard deviation of the retail installations be 2.25 days. Let us further assume that Ameritech did 120 installations for CLEC A and that the wholesale sample mean for CLEC A was 3.50 days. Then the modified z score is

$$z=\frac{\bar{x}-\bar{a}}{\sigma_x\sqrt{\frac{1}{n_x}+\frac{1}{n_a}}}=\frac{3.20-3.50}{2.25\sqrt{0.00001+0.0083}}=-1.46$$

Now compute the balancing critical value with which to compare the modified z score.

$$z^*=-\frac{\delta\sqrt{n_x n_a}}{2\sqrt{n_x+n_a}}=-\frac{0.25\sqrt{100{,}000\cdot 120}}{2\sqrt{100{,}000+120}}=-1.37.$$

We see that the modified z score is less (more negative) than the balancing critical value. Therefore, in this example, Ameritech would be out of compliance. The value of the severity ratio is

$$(z/z^*)=\frac{-1.46}{-1.37}=1.07.$$

This ratio value is designated as a basic failure, and the remedy amount would be

$$\begin{aligned} r(1.07) &= a(1.07)^2 + b(1.07) + c \\ &= \$5{,}625 \times (1.15) - \$11{,}250 \times 1.07 + \$8{,}125 \\ &= \$2{,}556.25 \end{aligned}$$

This would be the amount due CLEC A for discrimination by Ameritech in a time to install service measure, in the month of interest. A similar calculation would be done for each measure touched by CLEC A to obtain the total remedy due CLEC A. Finally, CLECs B, C, D, etc. would have this process repeated for each submeasure they each touched to calculate their corresponding remedies.

41. The table below, prepared using MS Excel on a PC, shows how the remedy amount changes as the wholesale mean varies from 3.20 days to 4.20 days with all other quantities remaining the same as in the previous example. The first column is the retail sample size; the next is the retail sample mean; the third column is the retail standard deviation. The next two columns refer to Ameritech performance for the wholesale CLEC A customers. These columns are the wholesale sample size and the wholesale sample mean. The wholesale sample mean has been prepared to vary in small steps from a compliant declaration to a severely failing one. The results of the changing test declarations are shown in the next three columns that display the modified z scores, balancing critical value, and severity ratios. The last two columns exhibit the performance designation and calculated remedy amount.

The range of wholesale sample means take us through the entire range of possible remedy values.

n_x	$\bar{x}$	σ_x	n_a	$\bar{a}$	z	z^*	z/z^*	Failure	Remedy
100,000	3.20	2.25	120	**3.20**	0.00	-1.37	0.00	Compliant	**$0.00**
100,000	3.20	2.25	120	**3.30**	-0.49	-1.37	0.36	Compliant	**$0.00**
100,000	3.20	2.25	120	**3.40**	-0.97	-1.37	0.71	Compliant	**$0.00**
100,000	3.20	2.25	120	**3.50**	-1.46	-1.37	1.07	Basic	**$2,525.00**
100,000	3.20	2.25	120	**3.60**	-1.95	-1.37	1.42	Basic	**$3,502.78**
100,000	3.20	2.25	120	**3.70**	-2.43	-1.37	1.78	Intermediate	**$5,902.78**
100,000	3.20	2.25	120	**3.80**	-2.92	-1.37	2.13	Intermediate	**$9,725.00**
100,000	3.20	2.25	120	**3.90**	-3.41	-1.37	2.49	Intermediate	**$14,969.44**
100,000	3.20	2.25	120	**4.00**	-3.89	-1.37	2.84	Intermediate	**$21,636.11**
100,000	3.20	2.25	120	**4.10**	-4.38	-1.37	3.20	Severe	**$25,000.00**
100,000	3.20	2.25	120	**4.20**	-4.87	-1.37	3.56	Severe	**$25,000.00**

The computations shown above for tier 1 parity measures are very similar to and as direct as tier 1 benchmarks, tier 2 parity measures, and tier 2 benchmarks.

42. Another piece of information I provide is calculating chronic remedy payments. The CLEC plan contains a simple and direct chronic remedy structure. Remedies are paid when the results for a given submeasure fail for the third month in a row. The severity of the failure is no longer relevant, as SBC/Ameritech has continued to perform below the requirement in the business rules of the measure. For Tier I payments, a chronic failure is always remedied at $25,000, and is in lieu of the payment that would be calculated using the reported results. Similarly, a chronic remedy payment for Tier II failures would be paid at n$25,000, where n is taken from the market share chart supplied with the March 8,

2001 Joint Comments of the Indiana CLECs. (Exhibit 3 to those comments).

Once a chronic remedy payment has been made for a given submeasure, that level of payment ($25,000 for Tier I, n$25,000 for Tier II) continues until the results return to acceptable levels. If the given submeasure again fails after a period of compliance, the remedy payments are calculated for Month 1, and if failure occurs in the next month, for Month 2, and if failure occurs in the next month, the payment returns to $25,000 or n$25,000.

43. The next element of my illustration of the Joint CLEC Plan is providing an example where the review threshold applies. The review threshold is reached when SBC/Ameritech incurs remedy payments to CLECs and to the State in excess of 1/6 of 36% of net return in a given month. In Indiana's case, 36% of net return is approximately $125 million. If SBC/Ameritech's payments in a given month exceed 1/6 of $125 million, or $20.9 million, a Commission review would begin.

For example, let's assume that there are 15 CLECs receiving remedy payments in a given month. Let's also assume that all the payments for the failing submeasure are at the severe or chronic level ($25,000).

Let's also assume that SBC/Ameritech has chronically or severely failed 50 tier 2 submeasures (n$25,000, where the market penetration factor, n, is currently 10 in Indiana).

The Tier II payment would be $1,250,000 (5*(10*$25,000)). Let's then assume that SBC/Ameritech chronically or severely failed 775 submeasures, or 52 submeasures for each of the 15 CLECs. The payments for both Tier I and Tier II would then exceed $20.9 million, and a Commission review of Ameritech's poor performance would begin. Clearly, at this poor level of performance, such a review would be warranted.

44. I will now provide below an example of a small sample size and a large sample size to demonstrate my concern about small sample sizes for CLECs.

The truncated z statistic is a quantity that is derivable from data according to a procedure we will describe below. When it is calculated it plays the role of a test score to be compared to a balancing critical value to determine whether to declare parity/disparity for a submeasure. We explain here how and why to compute this truncated z score and also show that it reduces to the modified z score under the provisions of the Indiana CLEC statistical proposal.

45. In studying detailed, actual performance data the statisticians from AT&T and Ernst & Young (BellSouth's consultant) had as an objective to assure

that each submeasure was deeply disaggregated to prevent masking of poor performance in one dimension of a measure by another. For example, by combining installation times for pre-certified xDSL with those for manual T1 service, a large number of complex T1 installations might easily mask the shorter times of pre-certified xDSL installation. An ILEC could discriminate against CLECs selling xDSL by lengthening wholesale installation times. Combined with the T1s, the overall average installation time would insignificantly higher. The aggregated measure could easily appear to be in parity, when in fact there was discrimination. To prevent such anomalies, the statisticians devised a method that would require deep disaggregation not only by service, but also down to the wire-center and even time of month. In the state of Louisiana, where these deliberations took place, this deep disaggregation led to a collection of over 10,000 submeasures (cells) per CLEC. Each of these cells is then separately analyzed to determine it modified z value.[7] Next, all cells with positive (better wholesale than retail) modified z score have that modified z score reset to zero. This is the origin of the term "truncation." Other cells, with negative modified z scores keep their values. A weighted average of the cells contained within a pre-specified aggregated submeasure is then performed.[8] Naturally the modified z scores of cells that have been

[7] Most of these cells have sizes so small that permutation analysis needs to be performed in order to estimate the modified z score. Although this is a perfectly appropriate technique, and one that we recommend, but do not require, in the CLEC plan for the smallest sample sizes, it does lead to a heavier requirement on computational capability then the table look-up techniques that are appropriate for larger sample size.

[8] There remains some ambiguity regarding exactly how to do the weighted sum in the statistical method as proposed in Louisiana. Specifically, one must decide whether to keep the truncated

truncated do not contribute, thereby reducing the possibility of masking of poor performance by good performance. The resulting weighted average of cells' modified z scores is then compared to the calculated balancing critical value appropriate for the aggregated submeasure, which fails or passes according to this test. Finally, remedies are calculated.[9]

46. The above methodology is very general, and although it is sufficiently applicable for BellSouth to adopt it, it can be reduced to a simpler form in Indiana that captures many if not all the benefits. It is this reduced, simpler form that the CLECs propose in this State. The first simplification that the Indiana CLECs propose is that instead of performing a very (perhaps overly) deep disaggregation, the final plan adopts the measure set and disaggregations already agreed upon in Indiana. The CLECs believe that this level of disaggregation is sufficient to prevent masking of poor performance in almost all cases, and there is thus no need to go down to the wire center dimension, for example. *The CLEC plan therefore takes the submeasure level in Indiana as the cell level.*[10] Next, in order to produce adequate incentive for Ameritech, the CLECs propose that remedies generate at the submeasure level with no further aggregation or

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cell points in the denominator of the weighted sum. The Indiana CLEC proposal does not suffer from this ambiguity because it does not propose an overly deep disaggregation but relies on the submeasures already agreed upon in State collaboratives.

[9] Much like in Indiana, at this point the agreement between the parties in Louisiana diverges. Thus, there is agreement on the statistical methodology, but not how to convert the statistics into remedial dollar amounts.

[10] The CLECs believe that this simplification is worth the slight reduction in accuracy over the truncation approach. It not only lines the plan up with the Indiana measures set, it also leads to a slightly more lenient performance test for Ameritech.

complexity associated with per transaction calculations.[11] Therefore, each cell stands on its own in the CLEC plan, and the truncated z statistic reduces to the modified z score for each submeasure. There is no truncation and no further need for reaggregation – a much simpler approach.

47. Finally, the CLEC plan adopts the balancing methodology by defining the balancing also to occur at the submeasure cell level. Ameritech Indiana criticizes this methodology (Exceptions, p. 28), so my explanation will show the meritless nature of their assertion the balancing methodology is unduly comples. This definition referred to above is perfectly consistent with the spirit and letter of the statistical methodology and dictates a direct parity comparison of the modified z score computed on a submeasure basis to the corresponding balancing critical value.

48. I now describe the methodology for balancing the error probabilities when the modified z statistic is used for performance measure parity testing. There are four key elements of the statistical testing process:

1. the null hypothesis, H_0, that parity exists between ILEC and CLEC services,
2. the alternative hypothesis, H_a, that the ILEC is giving better service to its own customers,
3. the Modified z test statistic, z, and
4. a critical value, c.

[11] We have repeatedly made the case that a transaction based remedy plan is unfair to the market whenever sample sizes are small. We furthermore suggest that a transaction based plan does not make a CLEC whole from discrimination because the per transaction remedies do not factor in consequential effects such as harm to good will or brand name, bundled customer revenues, and subsequent retraction of market activity by a CLEC, to name a few.

The decision rule[12] is

- If $z < c$ then accept H_a.
- If $z \geq c$ then accept H_0.

There are two types of error possible when using such a decision rule:

Type I Error: Deciding favoritism exists (accept H_a) when there is, in fact, no favoritism (H_0 is true).

Type II Error: Deciding parity exists (accept H_0) when there is, in fact, favoritism (H_a is true).

The probabilities of the two types of error are:

Type I Error: $\alpha = P(z < c \mid H_0)$.

Type II Error: $\beta = P(z \geq c \mid H_a)$.

In what follows, we show how to find a balancing critical value, z^*, so that $\alpha = \beta$. □

The general form of the test statistic that is being used is

$$z_0 = \frac{\hat{T} - E(\hat{T} \mid H_0)}{SE(\hat{T} \mid H_0)}. \qquad (.1)$$

Where

$\hat{T}$ is an estimator that is (approximately) normally distributed,

$E(\hat{T} \mid H_0)$ is the expected value (mean) of $\hat{T}$ under the null hypothesis, and

$SE(\hat{T} \mid H_0)$ is the standard error of $\hat{T}$ under the null hypothesis.

Thus, under the null hypothesis, z_0 follows a standard normal distribution.

However, this is not true under the alternative hypothesis. In this case,

[12] This decision rule assumes that the smaller a performance measure is, the better the service. If the opposite is true, then the decision rule should be reversed by using –z in place of z.

$$z_a = \frac{\hat{T} - E(\hat{T} \mid H_a)}{SE(\hat{T} \mid H_a)}$$

has a standard normal distribution. Here

$E(\hat{T} \mid H_a)$ is the expected value (mean) of $\hat{T}$ under the alternative hypothesis, and

$SE(\hat{T} \mid H_a)$ is the standard error of $\hat{T}$ under the alternative hypothesis.

Notice that

$$\begin{aligned} \beta &= \mathrm{P}(z_0 > c \mid H_a) \\ &= \mathrm{P}\left(z_a > \frac{cSE(\hat{T} \mid H_0) + E(\hat{T} \mid H_0) - E(\hat{T} \mid H_a)}{SE(\hat{T} \mid H_a)} \right), \end{aligned} \qquad (.2)$$

and recall that for a standard normal random variable z and a constant b, $\mathrm{P}(z < b) = \mathrm{P}(z > -b)$. Thus,

$$\alpha = \mathrm{P}(z_0 < c) = \mathrm{P}(z_0 > -c) \qquad (.3)$$

Since we want $\alpha = \beta$, the right hand sides of (.2) and (.3) represent the same area under the standard normal density. Therefore, it must be the case that

$$-c = \frac{cSE(\hat{T} \mid H_0) + E(\hat{T} \mid H_0) - E(\hat{T} \mid H_a)}{SE(\hat{T} \mid H_a)}.$$

Solving this for c give the general formula for a balancing critical value, z^*:

$$z^* = \frac{E(\hat{T} \mid H_a) - E(\hat{T} \mid H_0)}{SE(\hat{T} \mid H_a) + SE(\hat{T} \mid H_0)} \qquad (.4)$$

Now, for example, the modified z statistic, z, for a mean measure is given by

$$z = \frac{\hat{T}}{s_1\sqrt{1/n_1 + 1/n_2}}$$

where $\hat{T} = \overline{X}_1 - \overline{X}_2$ and subscripts 1 and 2 refer to ILEC and CLEC quantities, respectively.

One possible set of hypotheses, that takes into account the assumption that transaction are identically distributed within LECs, is:

H_0: $\mu_1 = \mu_2, \quad \sigma_1^2 = \sigma_2^2$

H_a: $\mu_2 = \mu_1 + \delta\sigma_1, \sigma_2^2 = \lambda\sigma_1^2, \quad \delta > 0 \text{ and } \lambda \geq 1.$

Assuming that n_1 is large enough so that s_1 adequately approximates σ_1, we have

$$E(\hat{T} \mid H_0) = 0$$

$$SE(\hat{T} \mid H_0) = \sigma_1\sqrt{1/n_1 + 1/n_2}$$

$$E(\hat{T} \mid H_a) = -\delta\sigma_1$$

$$SE(\hat{T} \mid H_a) = \sigma_1\sqrt{1/n_1 + \lambda/n_2}$$

Substituting these values in equation (C.5) gives

$$z^* = \frac{-\delta}{\sqrt{1/n_1 + 1/n_2} + \sqrt{1/n_1 + \lambda/n_2}}$$

$$= \frac{-\delta\sqrt{n_1 n_2}}{\sqrt{n_1 + n_2} + \sqrt{\lambda n_1 + n_2}}$$

49. The preceding equations have indexed the alternative hypothesis by two parameters, λ and δ. While statistical science can be used to evaluate the impact of different choices of these parameters, there is not much that an

appeal to statistical principles can offer in directing specific choices. Specific choices are best left to business and telephony experts. Still, it is possible to comment on some aspects of these choices:

50. Parameter Choice for λ. The parameter λ indexes an alternative to the null hypothesis that arises because there might be greater unpredictability or variability in the delivery of service to a CLEC customer over that which would be achieved for an otherwise comparable ILEC customer. Typically, there is little basis for choosing a value of λ other than 1, hence the CLEC Plan has it valued as such,[13] in which case the formula for z^* simplifies to

$$z^* = \frac{-\delta\sqrt{n_1 n_2}}{2\sqrt{n_1 + n_2}}$$

51. Parameter Choice for δ. The parameter δ is much more important in the choice of the balancing point than was true for λ because it directly indexes the difference in average service. The CLEC plan uses a value of δ less than 0.25.

52. Ameritech has criticized the Joint CLEC Remedy Plan's use of a delta parameter, and asserted that they are unaware of any studies that have been introduced to discuss how large differences in performance must be before they have an impact on customers. I will provide below a detailed discussion rebutting this claim in detail, although I should also note that the

alleged missing information is also part of the October, 2000 discussion I had with Ameritech's colleagues. I will also Ameritech Indiana's claim that, without this information, it is not possible to implement the CLECs proposal in a way that follows its intent of setting the alternative hypothesis at some level that has an important, material impact on consumers.

53. When performing a statistical parity test, such as the kind envisioned by all parties for the purpose of gauging compliance and calculating consequences for discrimination, a number of elements are necessary. There is broad agreement that a one-sided simple hypothesis test based on a sample test statistic, such as the modified z score, and a critical value for the statistic is appropriate. The test declares, for each submeasure, whether there is sufficient evidence to reject the null hypothesis in favor of an alternative. Also agreed is that the null hypothesis is the one that assumes that parity wholesale service is provided by the ILEC to the CLEC's wholesale customers relative to the service the ILEC provides to its own retail customers. Strictly speaking in order to properly execute the test, a particular alternative hypothesis needs to be specified. The specific alternative helps define the critical value of the test. That is to say, if we reject the null hypothesis (parity) what do we accept in its stead? The reason this is important is that if the alternative hypothesis is not too different than the null (just mildly out of parity), a given sample of data (and test statistic) is more likely to reject the null in favor of the alternative then if

[13] Ameritech Indiana complains Lambda is not properly defined. (Exceptions, p. 28). Frankly, that is puzzling to me, since it is defined in great detail in the Joint CLEC Plan. To clear-up

the alternative is very different from the null (severely out of parity). The specification of the alternative hypothesis is thus critical to fully defining the statistical test.[14]

54. AT&T and Ernst & Young (RBOC BellSouth's consultant) have discovered, after viewing actual ILEC and CLEC data in Louisiana under a nondisclosure agreement, that a reasonable family of alternative hypotheses can be defined in terms of a continuous parameter that they have called delta (□).[15] The quantity □ may be thought of as (but is not exactly) the shifted difference between the distribution that represents parity and the distribution that just represents disparity. Values of □ near zero represent alternative hypotheses mildly removed from parity. As the value of delta increases the alternative monotonically increases its dissimilarity from parity. According to the statisticians, the value of □ should be chosen such that the alternative represents a "material difference" from parity. How this material difference is established cannot be determined from theoretical

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Ameritech's continued confusion, I have defined it again here as lambda=1.

[14] The Ameritech Texas-style plan attempts to avoid the definition of the alternative by instead defining a fixed value of confidence and corresponding critical value. Unfortunately this methodology leads to inaccuracies and biases in the test because the number of data points in the sample is not under our control. Measures with small numbers of data points inherently have smaller values of associated confidence, and therefore the null (parity) hypothesis will more likely be accepted under a fixed critical value scenario. Conversely, tests with large numbers of data points will have increased likelihood of rejection of the null. These declarations may depend more heavily on the number of data points observed than on the actual performance and therefore defeat the purpose of the test, which is to determine whether the ILEC is providing substantially the same performance to the wholesale customers as to the retail customers. With a fledgling market, small CLEC, deeply disaggregated metric set, a low population geographic region, or nascent service, the number of transactions (data points) per submeasure will be small and therefore a fixed value of confidence unfairly favors the ILEC by enhancing the probability of acceptance, in an unbalanced way, of the null hypothesis for the submeasures.

[15] Ameritech evidently does not understand (or is feigning confusion in an effort to fight the CLEC Plan) the derivation of delta in the Joint CLEC Plan. Exceptions, p. 28. My explanation should assist the Commission in analyzing the derivation of delta in the Joint CLEC Plan.

Statistical argument. However, the implications of any choice can be assessed quantitatively.[16]

55. Consider the following table:

Probability of CLEC failure

P(ILEC)	0.00	0.10	□ 0.25	0.50	1.00
1.0%	1.0%	2.6%	5.0%	11.8%	31.9%
5.0%	5.0%	8.1%	11.8%	21.0%	44.0%

This table is calculated by assuming that an ILEC service system is producing performance measure data points drawn from an underlying normal distribution for its retail customers and a shifted normal distribution of the same measure for the CLEC wholesale customers.[17] The table helps us understand how much of a shift of the distribution is material. The magnitude of the shift, monotonically indexed by □, is approximately the number of standard deviations (worse) the shift of the wholesale mean is from the retail mean. One way of estimating which value of □ is appropriate is to consider value of the measure on the retail distribution for which 1.0% of retail customers get worse service; P(ILEC) = 1.0%. If the wholesale distribution is the same, that is in parity, (i.e., □ = 0.00), then 1.0% of the wholesale customers will also get the same or worse service as that measure value. The upper left-hand number in the box in the table

[16] Strictly speaking a different value of delta should be chosen for each submeasure, but this would be very time consuming. A universal choice for all submeasures, although not perfect, would be more accurate than a fixed confidence test because such a test not only also requires a different confidence value for each submeasure but also requires a different value for different

indicates this. If we move to the right and consider a value of □ = 0.10, then the wholesale distribution is somewhat worse, which leads to 2.6% of the wholesale customers receiving the same or poorer service than the worse 1% of the retail customers. Still greater shifts to □ = 0.25 and higher lead to larger probabilities of wholesale customers getting the same or worse service as the worst 1% of retail customers. At a shift of □ = 1.00, a very large 31.9% of wholesale customers will get the same or worse service as the worst 1% of retail customers. A corresponding row is computed for the worst 5% of retail customers. In this row, for example, a □ = 0.25 leads to 11.8% of wholesale customers have the same or worse service as the worst 5% of retail customers. This chart has enabled AT&T business planners to determine that a □ < 0.25 is required to give the firm a reasonable opportunity to compete, and therefore such a value of 0.25 or less could characterize a "material difference" for the purposes of defining an alternative hypothesis for the parity test.

The value of □ is incorporated into the calculation of remedies by performing a balancing of the type 1 and type 2 error probabilities. This calculation is the fairest way known to take into account a material difference and at the same time recognize that the number of data point observations taken per submeasure, although accurate as audited, is

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sample sizes. There is no principle for determining either of these in the Ameritech Texas-like plan. This plan therefore constrains us to suffer with resulting inaccuracies and biases.

[17] Similar but non-normal distributions will give similar table entries.

uncontrolled.[18] In order to understand this balancing procedure, it is necessary to study briefly the properties of a statistical test of parity. For any given submeasure, there is an actual state of parity or disparity that exists. Based on data collected from this actual state, the test is performed. However, random variation in the data can lead to erroneous declaration of the test. After all, only a finite number of data points are taken and they could come on a particularly bad or good day for the process. Therefore, consider the table below:

		Actual State of Performance Submeasure:	
		Parity	Disparity
Declaration of Statistical Test:	Parity	Correct Declaration	Type II Error
	Disparity	Type I Error	Correct Declaration

If the test declaration is one of parity and the actual state of the submeasure is also parity, then the declaration is correct. Similarly, if the declaration is one of disparity, and the actual state is one of disparity, again the test has succeeded correctly. However, due to random variation the declaration could be in error in two different ways: a declaration of disparity can ensue even though parity is the actual state, hence a type 1 error; a declaration of parity is calculated even though the actual reality is one of disparity, hence a type 2 error. Both types of errors can happen

[18] The number of data points depends on such business factors related to market openness, strategic marketing, and vendor capability to name a few. Therefore, it is very unlikely that anyone can control the "invisible hand" that creates and collects the data points.

and may have sizable probability depending on the number of data points and the (material) difference from parity of the alternative hypothesis.[19]

To deal with these errors in an even handed way, the CLEC proposed statistical methodology enables the calculation of the appropriate critical value for the test, which sets the type 1 error probability equal to the type 2 error probability for the alternative hypothesis described by the value of □. This balancing critical value was shown to equal

$$z^* = -\frac{\delta\sqrt{n_{ILEC}n_{CLEC}}}{2\sqrt{n_{ILEC}+n_{CLEC}}}.$$

Note that the balancing critical value, z^*, depends on the materiality, □, the number of retail data points, n_{ILEC}, and number of wholesale data points, n_{CLEC}. The table below shows for □ = 0.25 and very large retail sample size, the calculated critical value, z^*, for a small wholesale sample of 20 and a large wholesale sample of 1,000.[20] Recall that the type 1 and

[19] This fact exposes another important weakness in the use of a fixed confidence methodology such as proposed in the Ameritech Texas-like plan. This proposed statistical method not only fixes confidence but *de facto* fixes the type 1 error probability (at less than 5% as it turns out). Moreover, the type 2 error probability depends on this fixed type 1 error value and the number of data points collected. However, as we have noted the number of data points is determined by business factors out of anyone's control. Therefore, the type 2 error probability varies considerably and uncontrollably each month, for each submeasure and for each CLEC; the rate of this variation also increases as the magnitude of the type 1 error probability decreases. This circumstance disproportionately favors Ameritech at the expense of the overall accuracy of the tests. A fixed type 1 error methodology is often discussed in idealized text-book cases or more aptly for data collection in controlled experiments. For such controlled experiments a fixed type 1 error probability is properly assumed, sufficient data points are then taken to bring the type 2 error to any reasonable value, usually less than or equal to the type 1 error.

[20] It is easy to see that in neither balancing case is the critical value equal to – 1.65, the fixed critical value of the Ameritech Texas-like plan. Furthermore, if the submeasures are dominated by small sample sizes, then most critical values need to be closer to zero (larger) than – 1.65 in order to balance random error probabilities.

type 2 error probabilities are equal, and are easily calculated, in both cases.

□	n_{ILEC}	n_{CLEC}	z^*
0.25	100,000	20	– 0.56
0.25	100,000	1,000	– 3.95

It is to this simply calculated balancing critical value, not a fixed value, that the modified z score is compared in order to declare parity/disparity. Furthermore, the balancing critical value represents a natural scale for severity of failure. Therefore, the CLEC proposal appropriately calculates remedy amounts as a function of the modified z score expressed relative to the balancing critical value:

$$(z / z^*) = \frac{\delta(x_{CLEC} - x_{ILEC})}{2\sigma_{ILEC}}.$$

Here x_{ILEC} is the sample mean of the retail performance data points, x_{CLEC} is the sample mean of the wholesale performance data points, and σ_{ILEC} is the sample standard deviation of the retail performance data points. Note that the resulting expression has no explicit dependence on the sample sizes and so its value will not change when sample size does. Only the sample means and retail standard deviation affect the value.[21]

For each tier 1 parity measure and CLEC, when the quantity (z/z^*) is greater than unity, remedies are due the CLEC according to the formula in

the plan. For tier 2 parity measures in which CLEC aggregated data is used, when (z/z*) is greater than 5/3, remedies are due the State according to essentially the same formula. These tier 2 amounts differ from the tier 1 amounts in that they are multiplied by the market penetration factor, *n*. As indicated in the Louisiana statisticians joint filing, similar balancing critical values and severity variables can be defined for measures expressed as proportions, percentages, rates, and ratios.

56. Indeed, over the last few years, and especially due to the statisticians' report that came out of Louisiana, it's becoming more and more generally agreed to in the field that the appropriate method for calculating the critical value is not to use a fixed value. The appropriate method is to actually use what's called a balancing methodology that balances Type 1 and Type 2 error in order to determine the critical value and then proceed to calculate an appropriate test statistic and make the comparison to that critical value. This undoubtedly a major factor in why the Staff of the California Commission recommended, and later that Commission in a proposed order called for the balancing methodology.

This concludes my affidavit.

[21] With this simple measure of severity of failure, there is no need to go through the uncertainty and complexity of defining dollar amounts for each different type of transaction, for each tier, and for each month of failure as is necessary in the Ameritech Texas-like plan.

Executed on April 6, 2001

Dr. Michael Kalb

SUBSCRIBED AND SWORN TO BEFORE ME this 6 day of April, 2001.

Patricia A. Perhac
Notary Public

My Commission Expires:

4/8/2002

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

Ameritech Michigan's submission on performance measurements, reporting, and benchmarks in compliance with the October 2, 1998 Order in MPSC Case No. U-11654.

Case No. U-11830

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COMMENTS OF THE STAFF OF THE MICHIGAN PUBLIC SERVICE COMMISSION ON PERFORMANCE REMEDY PLANS

This proceeding was established by the Michigan Public Service Commission (Commission) to address issues related to the nondiscrimination provisions of the federal Telecommunications Act of 1996 (FTA) and the Michigan Telecommunications Act (MTA). The Commission envisioned that the proceeding would "provide a basis for determining appropriate performance measurements, the form and method for reporting performance, appropriate standards or benchmarks that should be met, and appropriate enforcement mechanisms."[1] These matters have been addressed in four separate orders in this proceeding[2] and proposals for several new performance measurements and revisions to some existing measurements are presently pending before the Commission. To date, however, the Commission has not yet adopted a comprehensive enforcement mechanism to address noncompliance with the measurements adopted by the Commission.

On February 9, 2000 the Commission established Case No. U-12320 in which matters are to be addressed relating to Ameritech Michigan's anticipated application to the Federal Communications Commission (FCC) for authority to provide interLATA services. In that Order

[1]May 27, 1999 Opinion and Order in the subject proceeding, p. 1.
[2]These orders were issued on May 27, 1999, September 3, 1999, February 9, 2000 and July 17, 2000.

the Commission established a collaborative process to develop, among other things, a specific performance assurance plan to "include provisions for Ameritech Michigan to make self-executing performance payments in the event its performance does not meet standards."[3] Performance measures and proposed remedy plans have been the subject of numerous discussions of the collaborative group established by the Commission. Although resolution of a number of issues relating to performance measures has been reached by the group, no agreement on a remedy plan has been reached. Therefore, as agreed by the collaborative group members, these issues are now being brought to the Commission for resolution.

On October 16, 2000 Ameritech Michigan and AT&T Communications of Michigan, Inc. (AT&T) submitted proposed remedy plans for consideration. AT&T represented in its filing that its proposal was prepared "by a broad coalition of Michigan CLECs, including McLeodUSA, XO (Nextlink), WorldCom, Birch, AT&T, CoreComm, Z-Tel and CompTel" (CLECs).[4] Separate comments were also filed on October 16, 2000 by McLeodUSA Telecommunications Services, Inc. (McLeodUSA) and jointly filed by Brooks Fiber Communications of Michigan, Inc., MCI WorldCom Communications, Inc., and MCImetro Access Transmission Services, Inc. (WorldCom). In accordance with the schedule established by the collaborative group members, the Staff of the Michigan Public Service Commission (Staff) files these initial comments on the plans proposed in the October 16, 2000 filings.

COMPONENTS OF A REMEDY PLAN SUPPORTED BY STAFF

Both Ameritech Michigan and the CLECs delineate a number of criteria which the FCC has indicated are important components of an enforcement or remedy plan to help determine

[3]February 9, 2000 Order in Case No. U-12320, p. 5.
[4]October 16, 2000 Affidavit of AT&T's Karen W. Moore, pp. 2-3.

whether plans fall "within a zone of reasonableness, and are likely to provide incentives that are sufficient to foster post-entry checklist compliance."[5] According to the FCC, important factors to consider include the total liability at risk; whether performance measurements include clearly-articulated definitions and business rules, relevant exclusions and statements of the applicable performance standards; whether plan components appear to be reasonably designed to detect and sanction poor performance when it occurs; whether mechanisms are reasonably self-executing; whether data validation and audit procedures are included; and whether accounting requirements specify the treatment of penalty amounts.[6] Although both Ameritech Michigan and the CLECs believe their proposed remedy plans compare favorably with the majority of these FCC-specified considerations, the FCC also concluded that plans "may vary in their strengths and weaknesses, and there is no one way to demonstrate assurance."[7]

Upon reviewing the proposals of Ameritech Michigan and the CLECs, Staff has concluded that certain aspects of each proposal are desirable. However, Staff also concludes that both plans are unnecessarily complex and that certain aspects of the plans could be eliminated, allowing for more ready review and dispute resolution without sacrificing the integrity of the plan. Specifically, Staff supports the premise of both plans which is based on determining Ameritech Michigan's compliance with either the parity or benchmark standard associated with about 70% of the approximately 130 performance measurements adopted by this Commission.[8]

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[5]June 30, 2000 FCC Order in CC Docket No. 00-65, In the Matter of SBC's Application Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Texas (the Texas 271 Order), ¶ 423.

[6]Texas 271 Order ¶ 422-430; December 21, 1999 FCC Order in CC Docket No. 99-295, In the Matter of the Application by Bell Atlantic New York for Authorization Under Section 271 of the Communications Act to Provide In-Region InterLATA Service in the State of New York (the NY 271 Order) ¶ 431-443.

[7]Texas 271 Order ¶ 423.

[8]Appendix 1 to Ameritech Michigan's October 16, 2000 filing does not appear to be updated to incorporate performance standards recently adopted by the Commission in July, 2000. Such an

Ameritech Michigan and the CLECs are in agreement regarding which measures have been designated with a parity performance standard, which have been designated with a benchmark standard and which do not have specific standards associated with them but are purely diagnostic in nature at this time. The performance measurements adopted by the Commission likewise include the designation of these standards. There is also agreement between Ameritech Michigan and the CLECs that both Tier 1 remedies, payable to CLECs, and Tier 2 remedies, payable to the State, are appropriate components of a remedy plan. Ameritech Michigan, however, proposes that Tier 1 remedies apply to certain non-diagnostic measures, Tier 2 to others, and both Tier 1 and Tier 2 remedies to others. Furthermore, Ameritech Michigan proposes that each non-diagnostic measure be rated according to its importance as either low, medium or high with remedies increasing according to the designated importance of the measure. The CLECs, on the other hand, propose that Tier 1 and Tier 2 remedies apply to all non-diagnostic measures and that no attempt be made to designate the level of importance of each of the performance measures. According to the CLECs, such a designation cannot account for the different degree of importance of particular measures to particular CLECs and would involve a very arbitrary determination of the relative importance of a measure.[9]

Staff supports the use of both Tier 1 and Tier 2 remedies. Since all measures are CLEC-affecting, Tier 1 remedies should apply to all non-diagnostic measures for which noncompliance is found to occur. On the other hand, Tier 2 remedies, payable to the State, should apply only to measures which are the most service-affecting and in this way the measures which are of the greatest importance will be so designated. No additional attempt should be made to assign low,

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update will be necessary and will have to additionally incorporate decisions on new measures filed in this proceeding on November 6, 2000 as well.

[9]October 16, 2000 Affidavit of AT&T's Karen W. Moore, pp. 4-5.

medium or high rankings to each measure as Ameritech Michigan has proposed. As Staff indicated in comments filed earlier in this proceeding on the subject of remedy plans, "Ameritech's proposal to give different weights to each measurement is very subjective and controversial and there is no need to attempt to identify which measurement should be afforded more weight. Deficiencies in any area can result in a CLEC loss of customer."[10] Although Staff's proposal will require a designation of the most service-affecting measures in order to specify where Tier 2 remedies apply, it avoids the necessity of further classifying each measure as to its relative degree of importance. In addition, Staff's proposal raises the incentive to Ameritech Michigan to provide compliant behavior for the most service-affecting areas without providing what Staff would regard as a negative incentive to the CLEC where the remedy is more desirable than compliant behavior (as increasing Tier 1 payments alone might do).

Ameritech Michigan proposes that most remedies be assessed on a per occurrence basis, although a per measure remedy would apply to a small number of performance measures. Therefore, as the volume of affected transactions increases, so does the remedy for most measures. The CLECs, on the other hand, propose that remedies be assessed on a per measure basis; if noncompliance with a measure occurs, the Tier 1 payment to the CLEC would not be greater for the high volume CLEC than for the low volume CLEC.

Staff supports the CLEC proposal for two reasons. First, as Staff indicated in earlier comments filed in this proceeding, "...by including a weighting based on the volume of orders affected, Ameritech's proposal incorporates a philosophy that many orders must be lost for a remedy of any consequence to result. In fact, a small, newly-in-business CLEC need lose only a very few customers before such loss is of great significance in that CLEC's ability to do

[10]November 24, 1998 Staff Comments in Case No. U-11830, p. 17-18.

business."[11] Secondly, it seems counter intuitive that remedies should increase as competition increases and the volume of orders rises. Rather, it is at these earliest stages of competition that compliant, nondiscriminatory behavior is the most critical.

Next, Staff observes that both Ameritech Michigan and the CLECs have proposed that remedies increase depending upon the severity of the noncompliance, and that Tier 1 remedies increase as the duration of the noncompliance continues. The CLECs propose that Tier 2 remedies also increase as the duration of noncompliance continues. Staff is in agreement that the severity and the duration of noncompliance should affect the level of both Tier 1 and Tier 2 remedies. Staff believes this escalation of Tier 2 remedies in particular should also be used in lieu of Ameritech Michigan's proposal for trebled Tier 2 payments for low volume, advanced and nascent services[12] and the CLECs' proposal for escalating penalties in less competitive markets.[13]

Both Ameritech Michigan and the CLECs have proposed certain caps to remedies calculated to be payable under the terms of their plans. The CLECs propose that total Tier 1 and Tier 2 remedies due in any year not exceed 44% of Ameritech Michigan's net return. The cap, however, is procedural only and would require the initiation of a Commission inquiry before further remedy payments would be due. Ameritech Michigan, on the other hand, proposes numerous caps applicable to remedy payments including an absolute annual cap of 36% of its net return (approximately $337,000,000 based on its 1999 return), a monthly cap (of 1/12 of the annual cap), a monthly cap on remedies due any individual CLEC, and a cap on the total amount of remedies payable on each of eleven performance measures. Staff supports the inclusion of an

[11]November 24, 1998 Staff Comments in Case No. U-11830, p. 18.
[12]October 16, 2000 Ameritech Michigan Comments, Attachment A, pp. 17-18.
[13]October 16, 2000 CLEC Proposed Remedy Plan, pp. 15-16.

annual procedural cap on total remedy payments of 40% of net earnings at which time a procedure to investigate the noncompliance would be commenced. Staff rejects the need for any other cap to be placed on the remedies payable under the plan.

Finally, the CLECs observe that Ameritech Michigan's remedy plan "does not provide SBC/Ameritech with enough incentive, based on the structure and the schedule of payments, to provide the CLECs with service in sufficient quality to allow competition to develop in Michigan."[14] As Staff has discussed above, it is its belief that the complexity of the proposals made by Ameritech Michigan as well as the CLECs make it very difficult to determine the level of remedies payable under the plan, and Staff maintains that a great deal of this complexity is unnecessary. Staff's comments here do not address the statistical questions also raised in the submissions, including but not limited to the need to make both Type 1 and Type 2 error determinations, the support for utilizing various levels of critical "Z" values, the necessity for performing statistical testing at all for benchmark compliance determinations, the necessity for utilizing quadratic equations to relate the level of noncompliance to increasing levels of remedy, and the need to exclude a number of noncompliant measures from any penalty at all as specified in the Ameritech-proposed "K" table. The components of each plan alone are daunting. The CLECs propose both Tier 1 and Tier 2 remedies. Tier 1 and Tier 2 remedies depend on the level of noncompliance, the duration of the noncompliance, and several statistical tests to determine the accuracy of reported results. Tier 2 remedies also depend upon the degree of competition in the marketplace. An annual cap is placed on all remedies payable but a Commission inquiry would be initiated at that time to determine whether further remedies are due. Ameritech Michigan's plan also envisions Tier 1 and Tier 2 remedies which depend upon a measure ranking

[14]October 16, 2000 Affidavit of AT&T's Karen W. Moore, p. 3. October 16, 2000 Affidavit of AT&T's Karen W. Moore, pp. 4-5

of importance, the level of noncompliance, the volume of transactions, and the duration of noncompliance. A certain number of noncompliant measures are excused each month and statistical testing on both parity and benchmark results would occur. Remedy payments are capped on an annual basis, a monthly basis, a per CLEC basis, and, for some measures, on a per measure basis. Additional Tier 2 payments may be assessed for low volume, advanced or nascent services. The complexity of the remedy proposals will make it very difficult to assure compliance or to resolve disputes relating to remedy payments.[15] It is, in fact, very difficult (if not impossible) to determine at this time whether the level of remedies under either plan could be judged to be sufficient to promote compliant, nondiscriminatory behavior. Neither party has attempted to quantify the application of its proposed plan. Staff believes that such information should be quantified. Therefore, Staff suggests that a detailed application of the components of each plan be provided by Ameritech Michigan and the CLECs at the time of Reply Comments in this proceeding (December 15, 2000) to enable the Commission to better understand the effect of adopting the plan, and the various components of the plan, supported by each party. For example, if Ameritech Michigan's remedy plan were applied as proposed to actual monthly performance measure results for Ameritech Michigan and the CLECs as a whole in a recent month, what remedies would have resulted? Similarly, what remedies would have resulted under the CLEC proposed plan? Application of the plans to actual data would be the most beneficial in comparing the two alternatives. An alternative analysis could be presented on the basis of various scenarios of possible operating results as well. Staff is of the believe that information such as this will go a long way toward both explaining the steps involved in application of the

[15]Staff does take note of Section 4.4 of Ameritech Michigan's remedy plan in which it generously proposes to provide the Commission Staff with software and technical support required for the limited purpose of utilizing permutation analysis.

plan and will provide an important indicator of the adequacy of results that might occur should such a plan be adopted.

MISCELLANEOUS ISSUES

Staff also addresses a number of other issues raised by the two parties in their remedy plan proposals. Staff submits that remedy plan payments should be dependent upon comparisons of CLEC results to Ameritech retail results and to Ameritech's separate subsidiary to which it provides interconnection. Although Ameritech has acknowledged in collaborative discussions that comparisons to each of the two Ameritech operations is supported by the FTA, it does not support the payment of remedies on the basis of comparisons to its separate subsidiary. Staff also agrees that each party may pursue additional remedies over and above those delineated in the plan which are available under state or federal law. Neither party objected to this position. Ameritech has suggested a number of circumstances under which automatic remedies would be suspended, including force majeure situations, CLEC failure, external third party issues, bad faith of CLECs, Y2K problems and lack of availability of CLEC forecasts. Staff submits that the business rules of each performance measure should specifically delineate those circumstances that are excluded from determinations regarding compliance with standards. Force majeure situations, for example, should affect retail and CLEC customers alike, at least for parity comparisons.

Next, Staff supports the payment of Tier 1 remedies to CLECs by direct check rather than crediting CLEC bills. This method will more easily permit separation from other billing disputes. Staff supports Ameritech Michigan's position that the terms of the adopted remedy plan not be generally reviewed every six months when a review of performance standards occurs, although an exceptional situation and review of benchmarks may be appropriate. Staff

defers to the Commission's original determinations in this proceeding regarding the performance of audits and who is liable for payment of those audits.[16] Staff also agrees with Ameritech Michigan that CLECs with existing interconnection agreements should select whether the provisions of the newly-adopted remedy plan or another alternative existing in its agreement apply. However, Staff also maintains that CLECs who interconnect with Ameritech Michigan on the basis of tariff alone must also be permitted to avail themselves of the terms of the remedy plan. Once again, it is Staff's understanding based on collaborative discussions, that Ameritech Michigan does not object to making such an alternative available pursuant to tariff.

Staff objects to any agreement that the number of performance measures with associated remedies automatically decline by 50% within two years of 271 approval as suggested in Section 6.5 of Ameritech Michigan's proposed plan. However, proposals may be made to modify performance measures and associated standards as may appear to be appropriate during six month reviews. Staff also supports a proposal to permit Commission recommendation to the FCC for removal of interLATA authority provided Ameritech Michigan performance measure compliance be deficient for a period of time.

On another matter, Staff notes that it is not clear from either proposed remedy plan how remedy payments will be reflected for accounting purposes. This point is addressed by the FCC in its considerations of the New York and Texas 271 applications. Staff proposes that, as was proposed by Bell Atlantic in New York and SBC in Texas, Ameritech Michigan should not reflect any portion of penalties paid out under the plan as expenses in revenue requirement determinations should such computations be required by regulatory or other agencies.

Finally, Staff notes with considerable interest the proposals included in each remedy plan

[16]In particular see the Commission's May 27, 1999 Order in this proceeding, pp. 10-12.

for dispute resolution. Ameritech Michigan proposes that, if agreed to by the parties, some disputes be referred to commercial arbitration for resolution, while others be resolved by Commission action. Staff proposes that any disputes between Ameritech Michigan and CLECs relating to Tier 1 payments (should such payments be incorporated in any plan ultimately adopted by the Commission) be automatically referred to commercial arbitration for resolution. In cases where Tier 2 remedies are disputed or ongoing noncompliance is at issue, only dispute resolution should be sought from the Commission. This mechanism will provide for appropriate utilization of the Commission's limited resources.

PARITY WITH A FLOOR

The CLEC Group, McLeod and WorldCom have also supported a proposal referred to as "Parity with a floor." Ameritech Michigan opposes this proposal. Under this proposal there would be a two-fold standard related to certain performance measurements. First, Ameritech Michigan would be required to provide results for each CLEC that is in parity with results achieved by its retail or separate subsidiary operations. However, if Ameritech Michigan's retail operations were also deficient to the point where it was not able to comply with the Commission's retail quality of service standards, parity performance for the CLEC would not suffice and another minimum standard would instead apply permitting at least the CLEC to comply with the Commission's retail standards. A situation has indeed occurred over the last few months where it is alleged that Ameritech Michigan has not complied with certain of the Commission's retail quality of service standards. If floor standards are not met, the CLECs have proposed that additional remedies apply.

Staff does not support this proposal at this time. The issue of quality of service, specifically as it relates to Ameritech Michigan is, of course, an issue of great concern to Staff,

the Commission and many of Ameritech Michigan's customers, including its wholesale customers participating in this proceeding. Indeed, the Commission has initiated a number of proceedings to help address these issues of critical concern.[17] Staff does support payment by Ameritech Michigan of any payments required by the Commission's retail quality of service rules and due to CLEC customers which result from Ameritech Michigan nonperformance. However, since remedies are not presently associated with the Commission's retail quality of service rules, and which assign remedies to only wholesale accounts would. Staff submits that such an approach would improperly motivate Ameritech Michigan to address the service issues of CLEC customers at the expense of Ameritech Michigan's own retail customers. In Staff's opinion such a position cannot be supported from the retail customer's point of view and does not readily assist in the solution to the overall quality of service problems in the State. Instead Staff supports the actions taken by the Commission to address the serious problems at issue.

CONCLUSION

Although there are a number of provisions of the remedy plans proposed by Ameritech Michigan and the CLECs that Staff supports, Staff submits that the overall complexity of the plans is unnecessary and should be rejected. In addition, Staff proposes that Ameritech Michigan and the CLECs provide in their December 15, 2000 comments in this proceeding (or earlier if available) examples of the application of the proposed remedy plans on actual performance data so that a better understanding of each plans components and results can be achieved. Finally, at this time Staff rejects the Parity with a Floor proposal of the CLECs and supports instead the Commission's ongoing efforts to achieve better service results for all

[17]In particular, see Case No. U-12571, In the matter, on the Commission's own motion, of legislative-type inquiry into the quality of telecommunication services of Ameritech Michigan and Case No. U-12598, In the matter, on the Commission's own motion, to establish service quality standards, including enforcement provisions, for Ameritech Michigan.

customers in the State.

Respectfully submitted,

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